

Copy

FEDERAL CONSISTENCY DETERMINATION

TITAN IV/CENTAUR LAUNCH COMPLEX VANDENBERG AIR FORCE BASE SANTA BARBARA COUNTY, CALIFORNIA

Prepared for:

UNITED STATES AIR FORCE
HEADQUARTERS SPACE SYSTEMS DIVISION
DEPARTMENT OF ENVIRONMENTAL PLANNING
EL SEGUNDO, CALIFORNIA

May, 1990

FL 2827
WSMC/PMET TECHNICAL LIBRARY
VANDENBERG AFB CA 93437-6021

ENVIRONMENTAL SOLUTIONS, INC.

2015



DEPARTMENT OF THE AIR FORCE

HEADQUARTERS SPACE DIVISION (AFSC)
LOS ANGELES AIR FORCE STATION, PO BOX 92960, WORLDWAY POSTAL CENTER
LOS ANGELES, CA 90009-2960

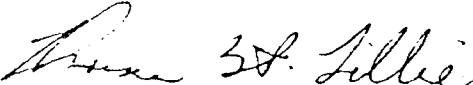
REPLY TO: DEV
ATTN OF:

10 May 1990

SUBJECT: Titan Centaur Launch Complex (TCLC) Federal Consistency Determination

TO: AFRCE-WR/ROV

1. Copies of the subject document are enclosed for your review and for forwarding to the California Coastal Commission. When forwarding the document to the Commission, please request it be included on the June 1990 public hearing agenda.
2. This proposal was previously presented to the Commission in September 1989 as the construction of a new launch complex, Space Launch Complex Seven (SLC-7), from which to launch the Titan IV/Centaur launch vehicle. Since the hearing on the former proposal in December 1989, the proposed action has been changed to the modification of the existing SLC-6.
3. Copies of the Draft Environmental Impact Statement were sent to the Commission on 20 July 1989, and copies of the Biological Assessment were sent on 16 March 1990.
4. If you need additional copies of the document or have any questions, please contact Mr. John Edwards at (213) 643-0934 or Autovon 833-0934.


THOMAS H. LILLIE, Major, USAF
Acting Chief,
Environmental Planning Division

1 Atch
TCLC Federal Consistency
Determination

cc: SSD/DEC
1STRAD/ET

TABLE OF CONTENTS

	<u>PAGE NO.</u>
LIST OF TABLES/LIST OF FIGURES	ii
1.0 INTRODUCTION	1-1
1.1 Regulatory Compliance	1-1
1.2 Background	1-1
1.2.1 TCLC	1-1
1.2.2 Space Transportation System at SLC-6	1-3
1.3 Organization of the Report	1-4
2.0 DESCRIPTION OF THE PROPOSED ACTION	2-1
2.1 Purpose and Need for the Proposed Action	2-1
2.2 Alternatives Considered	2-1
2.3 Project Facilities and Operation	2-6
2.4 Environmental Setting	2-12
3.0 POTENTIAL IMPACTS TO THE COASTAL ZONE	3-1
4.0 DATA AND INFORMATION IN SUPPORT OF FEDERAL CONSISTENCY DETERMINATION	4-1
4.1 Statement of Determination	4-1
4.2 Compliance with the California Coastal Act	4-1
4.2.1 Coastal Resources Planning and Management Policies	4-1
4.2.1.1 Public Access	4-1
4.2.1.2 Recreation	4-7
4.2.1.3 Marine Environment and Habitat Resources	4-9
4.2.1.4 Land Resources	4-15
4.2.1.5 Development	4-16
4.2.2 State Agencies	4-20
4.2.3 Development Control, General Provisions	4-20
5.0 ACRONYMS AND ABBREVIATIONS	5-1
6.0 REFERENCES	6-1

TABLE OF CONTENTS
(Continued)

LIST OF TABLES

<u>TABLE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
2.1	Proposed Utilization of Existing SLC-6 Facilities for TCLC	2-9

LIST OF FIGURES

<u>FIGURE NO.</u>	<u>TITLE</u>	<u>PAGE NO.</u>
1.1	Coastal Zone: North Coast Planning Area	1-2
2.1	Over-Water Launch Azimuths	2-2
2.2	Regional Location Map	2-4
2.3	Alternative Sites	2-5
2.4	SLC-6 Site and Surrounding Areas	2-7
2.5	SLC-6 Launch Complex	2-10
2.6	Nesting Locations of California Least Tern and Western Snowy Plover	2-14
4.1	Coastal Access: Vandenberg Air Force Base	4-3
4.2	Titan IV/Centaur Sonic Boom Footprint	4-11

1.0 INTRODUCTION

1. The purpose of this document is to demonstrate the consistency of the proposed United States Air Force (USAF) activity, known as Titan IV/Centaur Launch Complex (TCLC) (formerly known as Space Launch Complex 7), with the California Coastal Zone Management Program, as amended. The proposed activity is to modify Space Launch Complex 6 (SLC-6) at Vandenberg Air Force Base (VAFB) from which to launch the Titan IV/Centaur space launch vehicle.

1.1 REGULATORY COMPLIANCE

1. A Federal Consistency Determination for federal activities is required in accordance with the Federal Coastal Zone Management Act of 1972, as amended, Section 307(c)(1), and with the National Oceanic and Atmospheric Administration (NOAA) Regulations (15 Code of Federal Regulations [CFR] Part 930, revised). The California Coastal Zone Management Program, as amended January 1988 (California Public Resources Code, Division 20-California Coastal Act), and the establishment therein of the California Coastal Zone, have been approved by NOAA.
2. All lands owned, leased, held in trust, or whose use is otherwise by law subject solely to the discretion of the Federal government, are excluded from the coastal zone. However, all federal agencies are required to ensure that their activities are consistent, to the maximum extent practicable, with the NOAA-approved coastal management plan for actions that may cause spillover impacts within the coastal zone. The boundary of the coastal zone in the vicinity of Vandenberg Air Force Base is shown in Figure 1.1 (Coastal Zone: North Coast Planning Area).

1.2 BACKGROUND

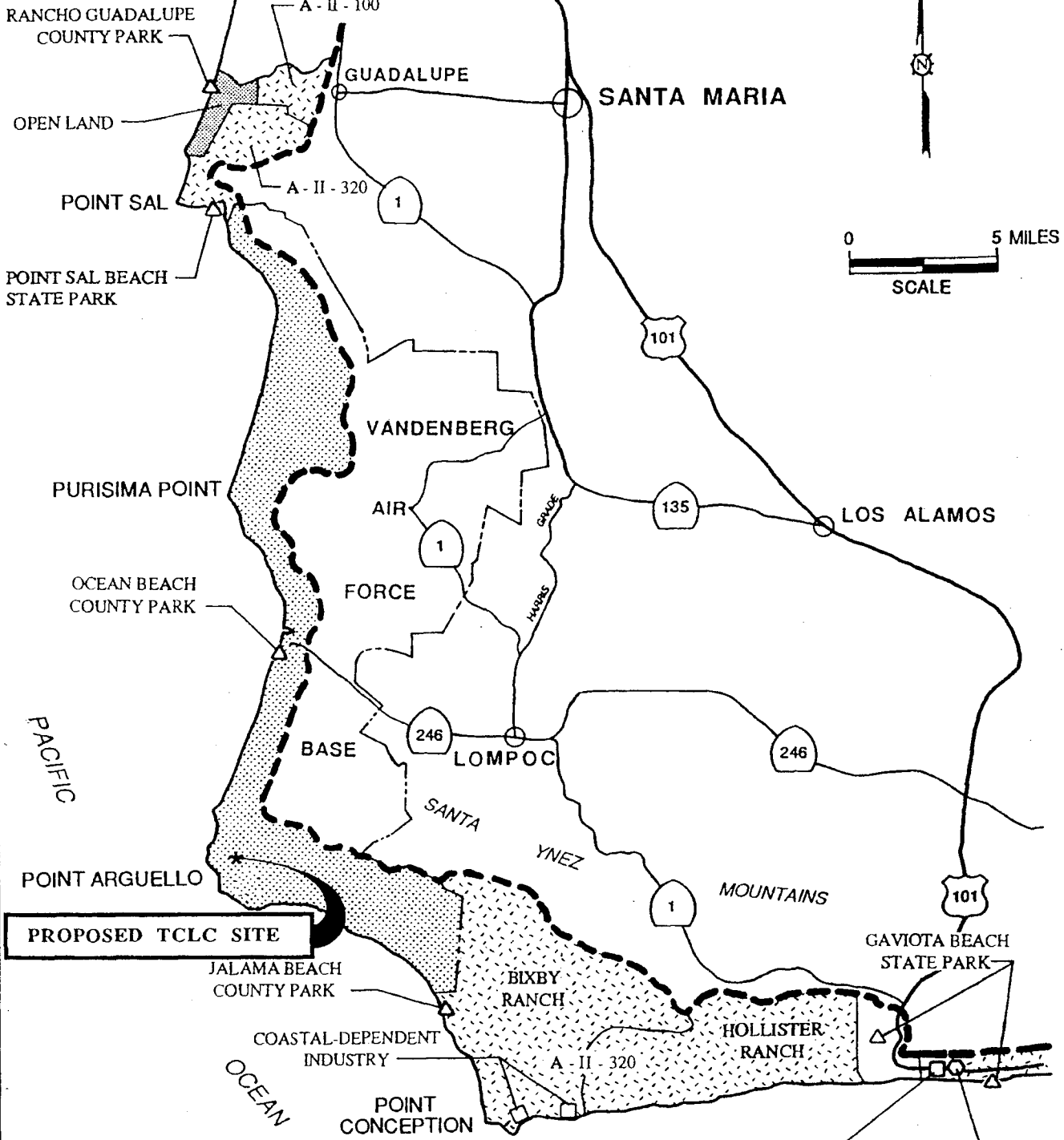
1.2.1 TCLC

1. This submittal is the latest step in the continuing process of coordination between USAF and the California Coastal Commission, begun in 1988, concerning this program at VAFB. This process has included: (1) review of program environmental documents by the Commission's staff, and (2) meetings between USAF personnel and the Commission's staff on project details and potential effects on the coastal zone.

NRQ APPROVED FOR RELEASE

87-2714 TCLC/FCD REV. 5/3/90

JUNE 2015



- LEGEND**
- COASTAL ZONE BOUNDARY
 - LAND UNDER FEDERAL JURISDICTION
 - COMMUNITY FACILITIES
 - INDUSTRIAL
 - OPEN LAND USES**
 - AGRICULTURE II (100 - 320-ACRE MIN.)
 - RECREATION
 - OPEN LAND

COASTAL-DEPENDENT INDUSTRY

EDUCATIONAL FACILITY

FIGURE 1.1

**COASTAL ZONE
NORTH COAST PLANNING AREA**

TCLC FEDERAL CONSISTENCY DETERMINATION
ENVIRONMENTAL SOLUTIONS, INC.

2. This interaction between the Coastal Commission and the USAF has been important to the Environmental Impact Analysis Process (EIAP) for the TCLC program, particularly in identifying environmental issues, evaluating alternatives for various actions, and developing measures to mitigate impacts to coastal resources.
3. The scope of this Consistency Determination is based on program activities and environmental issues for which the Commission has expressed concern, and on other issues which affect the coastal zone.

1.2.2 SPACE TRANSPORTATION SYSTEM AT SLC-6

1. In 1982, USAF proposed the construction or modification of facilities at VAFB to accommodate launches of the Space Shuttle as part of the Space Transportation System (STS) from the west coast. The proposed action included the following:
 - Construction of an **External Tank Landing Facility** at the Boathouse near Point Arguello to accommodate barge delivery of the external tanks to VAFB.
 - Construction/modification of approximately 3.2 miles of roads to create the **External Tank Tow Route** from the Boathouse to SLC-6.
 - Modification of existing roads to create the **Orbiter Tow Route** from North VAFB to SLC-6.
 - Construction/modification of **Facilities located at SLC-6** and other locations on VAFB for Assembly and Launch of the STS.
 - Extension of the **VAFB Runway** for STS landings.
 - **STS Launches** from SLC-6 beginning in 1985, with 10 launches projected annually from 1988 to 1994 and a total of 80 launches over the 10-year life of the program.
2. The construction/modification described above was determined by USAF to be consistent to the maximum extent practicable with the California Coastal Act of 1976 (Consistency Determination CD-21-82) (USAF 1982). The Commission issued a decision agreeing with the determination. The proposed action was implemented. Primarily as a result of the 1986 Challenger disaster, however, USAF has not used SLC-6 for STS launches.
3. The finding of consistency for the STS set a precedent to be considered by the Commission when reviewing this Consistency Determination, since the proposed action uses the same facility, as modified, to fulfill the objectives of the TCLC project.

1.3 ORGANIZATION OF THE REPORT

1. The contents of this Consistency Determination have been prepared in compliance with the requirements of 15 CFR Section 930.39, Content of a Federal Consistency Determination, which state that a consistency determination shall include:
 - A brief statement indicating whether or not the proposed action would be consistent to the maximum extent practicable with the (California Coastal) management program (as administered by the California Coastal Commission).
 - A detailed description of the proposed project.
 - The project's associated facilities.
 - The coastal effect of the project.
 - Data and information sufficient to support the Federal agency's consistency statement.

2. In compliance with these requirements, this Federal Consistency Determination is organized as follows:
 - 1.0 Introduction
 - 2.0 Description of the Proposed Action
 - 3.0 Potential Impacts to the Coastal Zone
 - 4.0 Data and Information in Support of Federal Consistency Determination
 - 5.0 Acronyms and Abbreviations
 - 6.0 References

2.0 DESCRIPTION OF THE PROPOSED ACTION

2.1 PURPOSE AND NEED FOR THE PROPOSED ACTION

1. The purpose of the proposed TCLC program at VAFB is to fulfill these needs: (1) support timely and reliable launch of critical Department of Defense (DOD) satellites from a location from which highly inclined and polar orbits can be safely achieved, (2) provide capability to launch payloads in the 10,000-pound class to high energy, inclined orbits, and (3) maintain assured access to space by providing backup launch capability for the Titan IV/Centaur and Titan IV No Upper Stage (NUS) space launch vehicles.
2. The Titan IV/Centaur vehicle configuration requires a specific launch pad design and associated support facilities. These facilities exist at Cape Canaveral Air Force Station (AFS) in Florida. Launches from Cape Canaveral, however, are constrained to easterly launch azimuths between 35 and 120 degrees, as shown in Figure 2.1 (Over-water Launch Azimuths). Consequently, polar orbits cannot be safely achieved.
3. As shown in Figure 2.1, the Pacific coast location of VAFB safely permits space launch azimuths of 150 to 201 degrees, allowing polar and other high inclination orbits. These orbits provide coverage perpendicular to the equator, as required for national defense, weather and earth resources surveillance, communications relay, navigational systems, and other scientific purposes. Another important type of high inclination mission capability provided by the VAFB location is the sun-synchronous mission, where the satellite orbit maintains its initial orientation relative to the sun.

2.2 ALTERNATIVES CONSIDERED

1. Alternatives to the proposed action were evaluated in the Draft EIS for the proposed action (formerly known as Space Launch Complex 7) (USAF 1989a). Other launch vehicles, including the Space Shuttle, were considered but determined not to be feasible, based on their inability to satisfy the project objectives of safely delivering satellites in the 10,000-pound class to high-energy, inclined orbits. Alternate locations outside of VAFB also were evaluated. Cape Canaveral AFS was rejected, due to the inability to safely achieve a polar orbit from this location. Other launch locations were determined not to be feasible due to environmental considerations, remoteness, absence of necessary infrastructure, and/or inability to satisfy mission requirements.

NRO APPROVED FOR RELEASE
1 JUNE 2015

87-271-1, TCLC/FCD, REV. 5/3/90

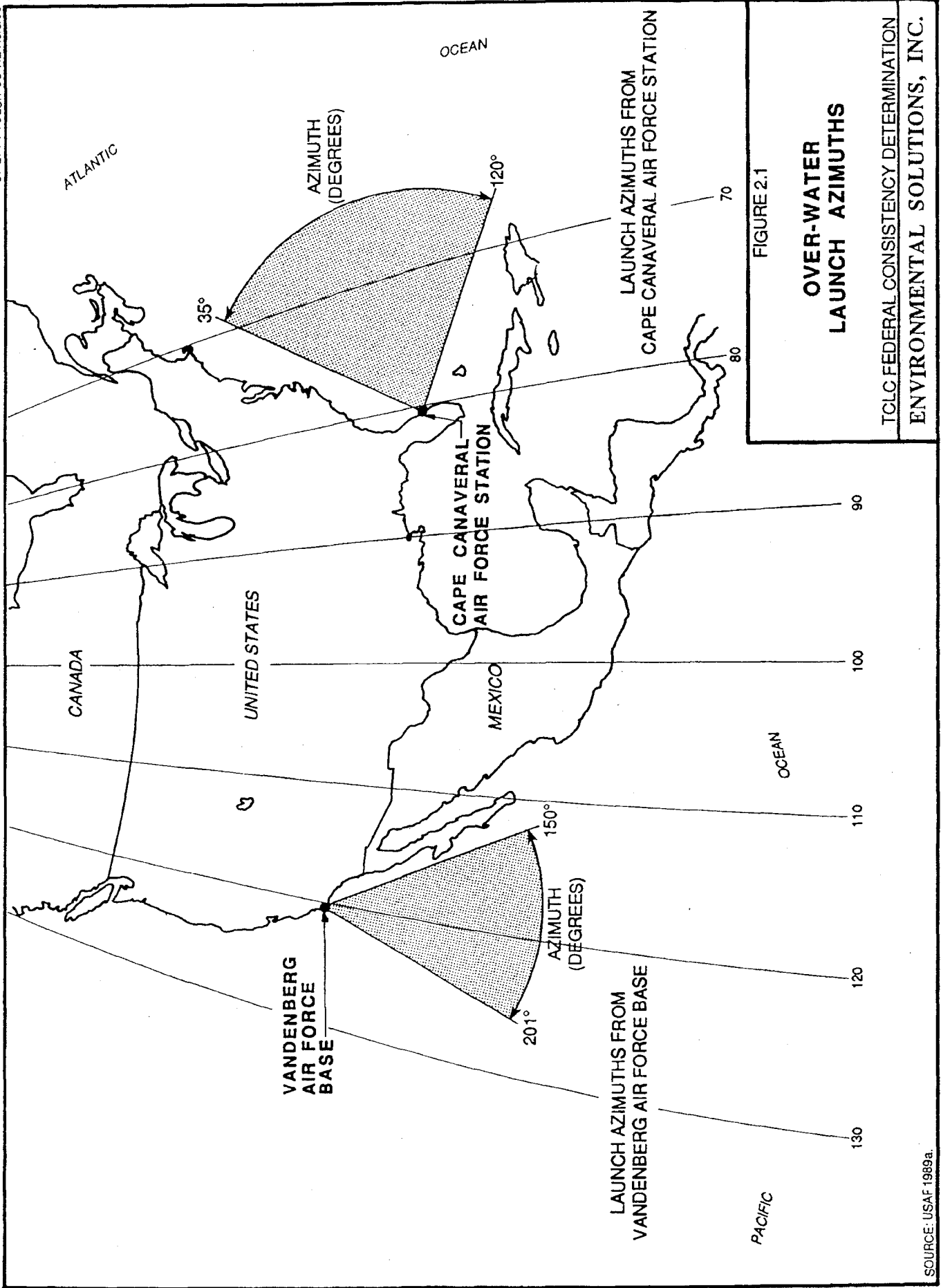


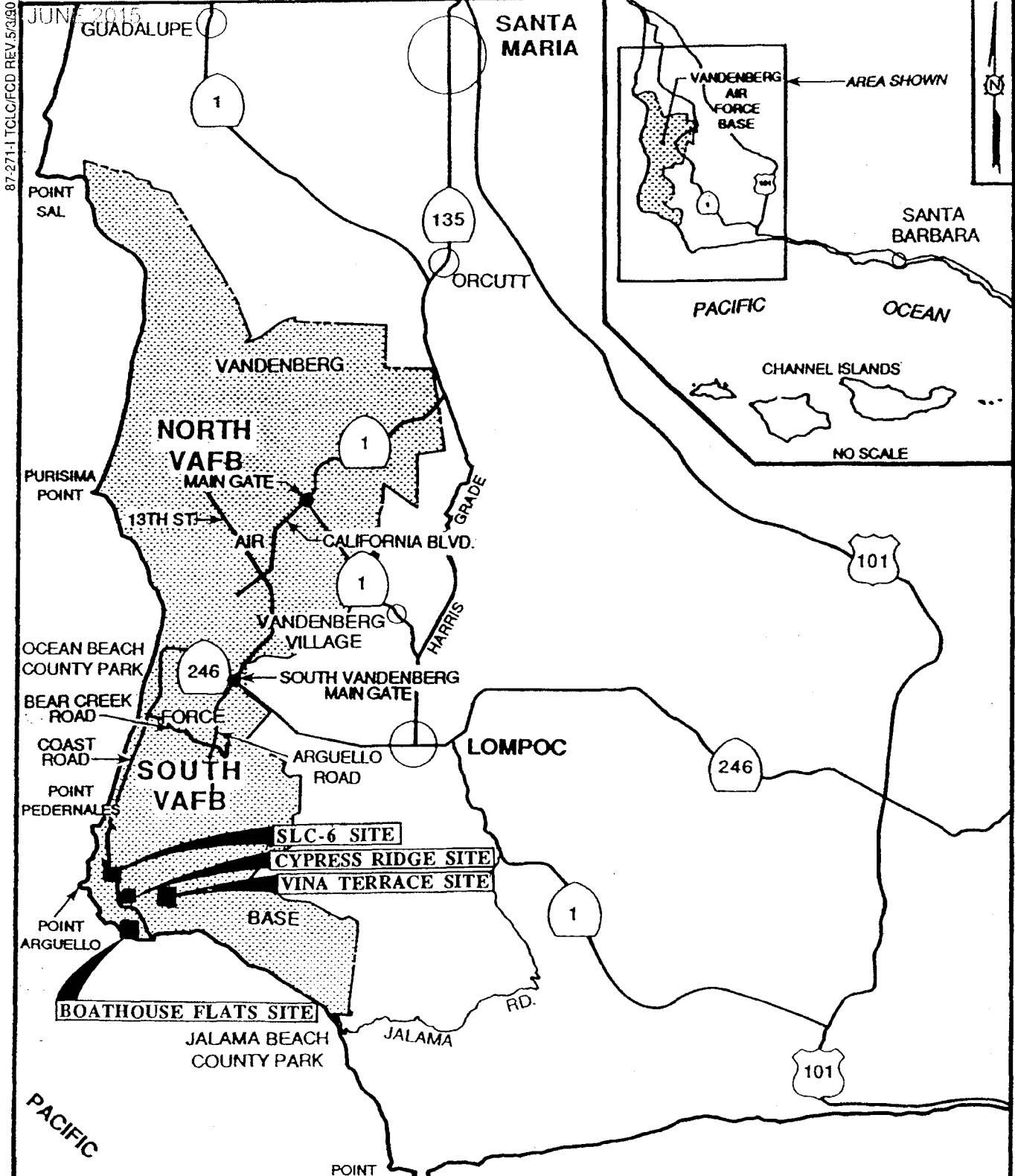
FIGURE 2.1

OVER-WATER LAUNCH AZIMUTHS

TCLC FEDERAL CONSISTENCY DETERMINATION
ENVIRONMENTAL SOLUTIONS, INC.

2. Existing VAFB launch sites also were evaluated. SLC-2, located on North VAFB, was rejected due to its small size and since launches from there require a dogleg maneuver to avoid populated areas. The extra fuel required to execute a dogleg effectively reduces the payload capacity below the 10,000-pound class mission requirement. With the exception of SLC-6, launch facilities located on South VAFB are either operational (SLC-3, SLC-4 West, and SLC-5), with scheduled missions that would not support the proposed program, or are being refurbished for other, specific missions (SLC-4 East).
3. The no action alternative also was evaluated and determined not to be acceptable. With implementation of this alternative, the USAF would not be able to achieve the required high energy, near-polar orbit for DOD satellites in the 10,000-pound class, and there would not be backup launch capability for other Titan IV/Centaur and Titan IV/NUS vehicles. The absence of this capability would unacceptably impact USAF access to space.
4. From the range of alternatives considered, it was determined that development of TCLC facilities at South VAFB would present the most reasonable course of action, based on mission requirements, technical needs, cost, engineering, and design (see Figure 2.2, Regional Location Map). Based on siting factors and mission requirements, three undeveloped sites, Cypress Ridge, Boathouse Flats, and Vina Terrace, and one developed site, SLC-6, were identified on South VAFB (see Figure 2.3, Alternative Sites). SLC-6 is an existing launch complex which has been configured to support the Space Shuttle, but which the USAF has placed in mothball status. The Cypress Ridge and alternative Boathouse Flats and Vina Terrace sites also are located on South VAFB, in an undeveloped area south of SLC-6.
5. Based on environmental analysis undertaken for the Draft Environmental Impact Statement (EIS) (USAF 1989a), the comments received from government agencies, private groups, and individuals on the Draft EIS, and recent Congressional action, USAF has determined that construction and operation of TCLC at the Cypress Ridge site and the conversion and subsequent operation of SLC-6 are the preferred alternatives to meet DOD launch program requirements.
6. Construction and operation of TCLC at the Cypress Ridge site is one of USAF's preferred alternatives since it allows the utilization of new design concepts and advanced capabilities important to supporting mission goals. USAF has also identified Cypress Ridge as one of its preferred alternatives since construction of a new launch complex would preserve existing

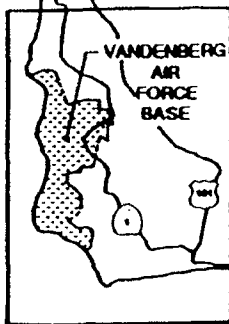
87-2741 TCLCFCD REV 5/2/80



JUN 7 2015

GUADALUPE

SANTA MARIA



SANTA BARBARA

PACIFIC

OCEAN

CHANNEL ISLANDS

NO SCALE

PURISIMA POINT

NORTH VAFB

MAIN GATE

13TH ST

AIR

CALIFORNIA BLVD.

GRADE

VANDBERG VILLAGE

HARRIS

OCEAN BEACH COUNTY PARK

246

SOUTH VANDBERG MAIN GATE

BEAR CREEK ROAD

FORCE

COAST ROAD

SOUTH VAFB

ARGUELLO ROAD

LOMPOC

246

POINT PEDERNALES

SLC-6 SITE

CYPRESS RIDGE SITE

VINA TERRACE SITE

POINT ARGUELLO

BASE

BOATHOUSE FLATS SITE

JALAMA BEACH COUNTY PARK

JALAMA RD.

101

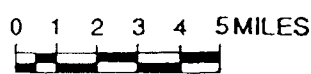
PACIFIC

OCEAN

POINT CONCEPTION

FIGURE 2.2

REGIONAL LOCATION MAP



TCLC FEDERAL CONSISTENCY DETERMINATION ENVIRONMENTAL SOLUTIONS, INC.

SOURCE: USAF 1988a.

JUNE 2015

87-271-1 TCLC/FCD REV. 5/3/90

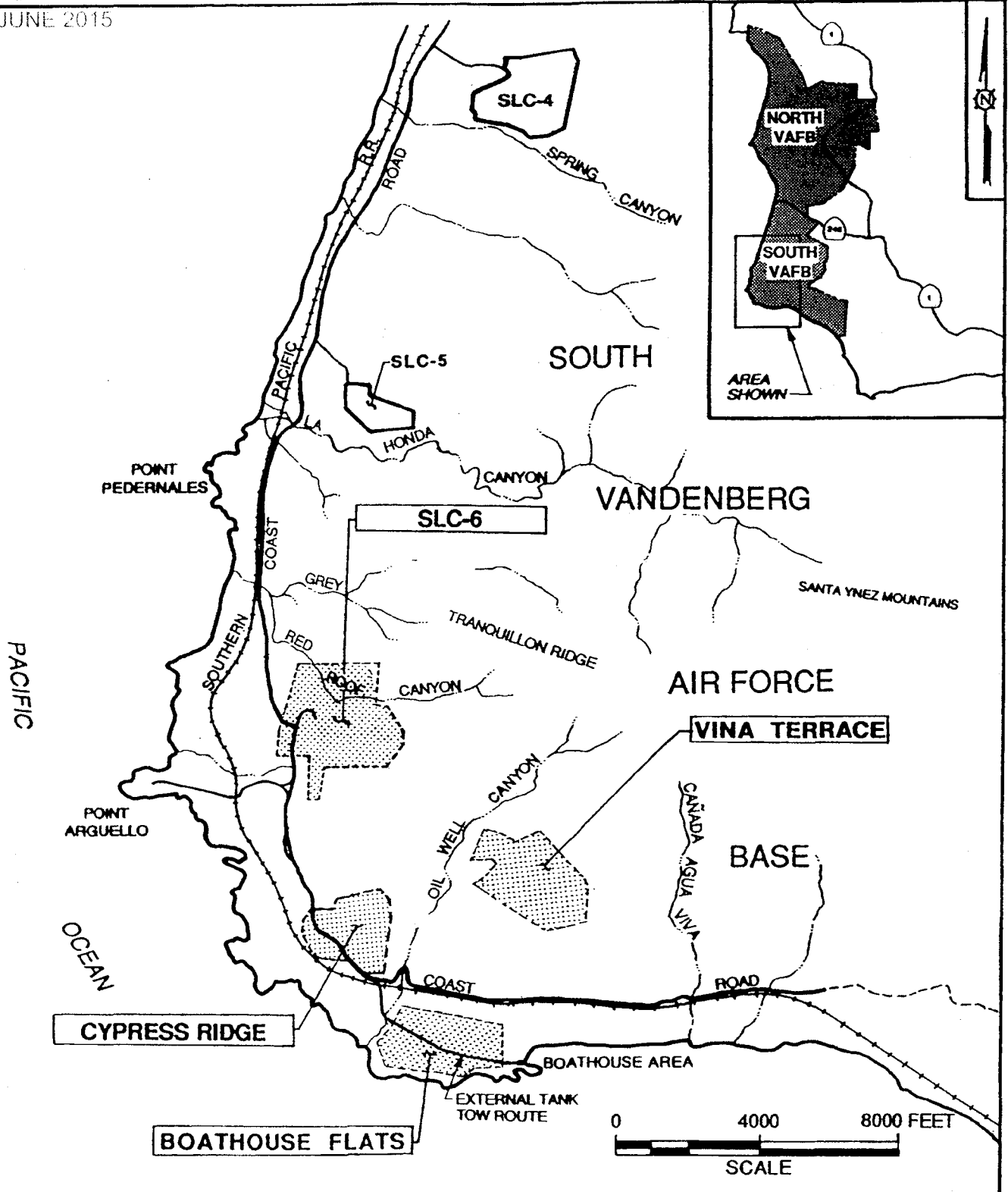


FIGURE 2.3

ALTERNATIVE SITES

TCLC FEDERAL CONSISTENCY DETERMINATION
ENVIRONMENTAL SOLUTIONS, INC.

SOURCE: ENVIRONMENTAL SOLUTIONS, INC. 1990.

launch capabilities at SLC-6 and since the analysis undertaken in support of the Draft EIS determined that most impacts associated with this alternative could be mitigated to an acceptable level.

7. The proposed conversion and subsequent operation of SLC-6 is the other USAF preferred alternative and is also the environmentally preferred alternative, as shown by the analysis documented in the Draft EIS. This alternative was favored by commenters on the Draft EIS and has received support in recent Congressional action.

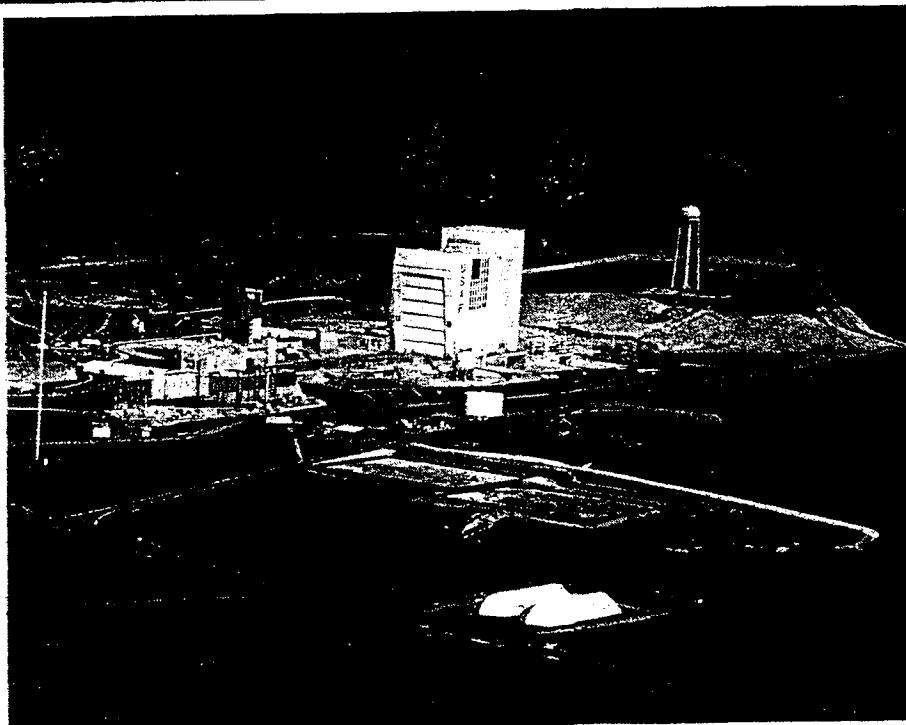
2.3 PROJECT FACILITIES AND OPERATION

1. The proposed action entails the development and operation of a Titan IV/Centaur Launch Complex on South VAFB in support of the DOD space program. Known as TCLC, the project would be located on South VAFB (see Figure 2.2) at the existing SLC-6. The Titan IV/Centaur is an unmanned, expendable launch vehicle capable of launching critical DOD payloads in the 10,000-pound class to high-energy orbits. The proposed facility would support requirements for timely launches of these payloads, from a location where highly inclined and polar orbits can be safely achieved. In addition, the proposed action would maintain assured access to space by providing backup launch capability for the Titan IV/Centaur and Titan IV/NUS vehicles. The proposed facility represents the latest modification to the continuing Titan program at VAFB.
2. The SLC-6 site (see Figure 2.4, SLC-6 and Surrounding Areas) was originally constructed in 1970 for the Titan IIIM manned launch space vehicle. The Titan IIIM was to be used for the Manned Orbital Laboratory (MOL) program. Subsequent to cancellation of the MOL program, the SLC-6 site was modified for the Space Shuttle. However, primarily as a result of the 1986 Challenger disaster, the USAF has not used SLC-6 for Shuttle launches. Use of the facility to fulfill the objectives of the TCLC project would result in utilization of some of the structures and equipment intended for the Space Shuttle program.
3. SLC-6 is located about one mile inland from the Pacific Ocean. The fenced complex covers an area of about 100 acres, although the total area that would be utilized for Titan IV/Centaur launches is estimated to be about 280 acres. Access to SLC-6 is primarily through the VAFB South Gate, as shown in Figure 2.2.

JUNE 2015

87-271-I-TCLC/FCD REV 5/7/90

138391



**EXISTING SLC-6 FACILITIES AND ADJACENT HILLS
VIEWED FROM THE SOUTH-SOUTHWEST.**



**EXISTING SLC-6 FACILITIES AND ADJACENT HILLS
VIEWED FROM THE NORTH-NORTHWEST**

FIGURE 2.4

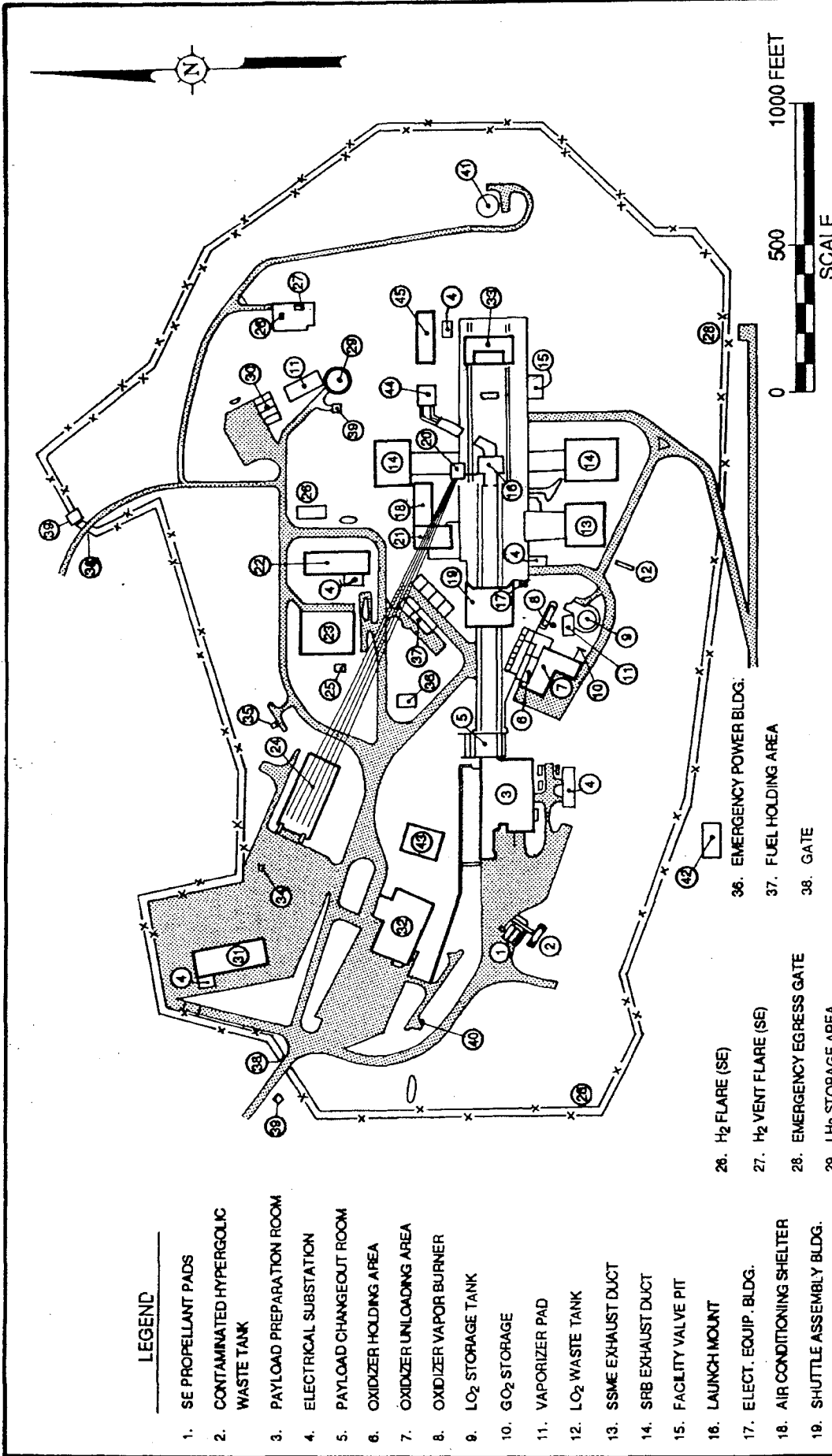
**SLC-6 AND SURROUNDING AREAS
ENVIRONMENTAL SOLUTIONS, INC.**

4. As planned, implementation of the TCLC at SLC-6 would involve retention of some facilities, modification of others, and demolition of some. All construction or modification activities for the Titan IV/Centaur are planned to occur in areas disturbed by previous construction. Ground-disturbing activities such as cut and fill are not anticipated to support the conversion of SLC-6. A list of major facilities and their utilizations is shown in Table 2.1 (Proposed Utilization of Existing SLC-6 Facilities for TCLC). The existing site configuration for the STS which would be utilized for the Titan IV/Centaur is shown in Figure 2.5 (SLC-6 Launch Complex).
5. The Payload Changeout Room (PCR) is not planned for use with the Titan IV/Centaur. This structure would be rolled back to the Payload Processing Room (PPR) so that it would be out of the way of ongoing activities. The PPR would be used for processing payloads to be launched from various facilities at VAFB.
6. The Shuttle Assembly Building (SAB) would be utilized as an all-weather enclosure during the vehicle integration and preparation phases of the launch cycle. During final prelaunch activities, the SAB would be backed away for vehicle preparation and launch. The existing Mobile Service Tower (MST) would be utilized after extensive modifications to interior structures. The MST was originally built for the Titan III and modified for the Space Shuttle. It would be reconfigured to accommodate the Titan IV/Centaur. The existing Access Tower also would be modified for the Titan IV/Centaur. The slidewire emergency egress (aerial escape tram) would be removed, since Titan IV launches are unmanned.
7. The existing launch mount (LM), designed for the Space Shuttle, would be demolished and replaced by a structure designed for the Titan IV. The launch exhaust ducts, designed for the Space Shuttle, would be adapted to the Titan IV configuration. The single main engine duct would be fitted with a permanent closure cap. A portion of the wall separating the two Solid Rocket Booster (SRB) ducts would be removed and modified so that launch exhaust would flow into both ducts.
8. Other major onsite facilities which would be modified or upgraded for the requirements of the proposed action include the communications system, security system, and guardhouse. Some facilities/systems which were constructed for the Space Shuttle would be inspected and brought to full operational capability for the proposed action. These include, but are not limited to, the hydrazine and N_2O_4 storage and transfer systems, the industrial wastewater treatment facility, evaporation ponds, water tank, and utilities (water distribution, electricity,

TABLE 2.1

**PROPOSED UTILIZATION OF
EXISTING SLC-6 FACILITIES
FOR TCLC**

FACILITY	STATUS				PROPOSED UTILIZATION
	UTILIZED IN PRESENT CONFIGURATION	UTILIZED WITH MODIFICATIONS	MOTHBALLED OR UTILIZED FOR OTHER PROJECTS	DEMOLITION	
Payload Processing Room (PPR)			X		Utilized for other projects
Payload Changeout Room (PCR)			X		Backed up to PPR (not utilized)
Shuttle Assembly Building (SAB)	X				Utilized in present configuration
Access Tower		X			Modified to accommodate Titan IV/Centaur
Aerial Escape Tram				X	Disassembled and disposed of offsite
Launch Mount (LM)				X	Subject to demolition
Launch Exhaust Ducts (LD)		X			Modified to accommodate Titan IV/Centaur.
Mobile Service Tower (MST)		X			Interior to be modified from Shuttle to Titan IV configuration
Operations Support Building (OSB)		X			Modified to accommodate Titan IV/Centaur
Launch Control Center (LCC)		X			Utilized for office space
Security Systems, guard shack		X			Completed, modify as necessary
Hydrazine Storage and Transfer		X			Modified, prepared for use, APCD permit
Nitrogen Tetroxide (N ₂ O ₄) Storage and Transfer		X			Modified, prepared for use, APCD permit
Cryogenic Storage Areas		X			Modified, prepared for use
Industrial Wastewater Treatment Facility		X			Modified with addition of equipment and storage capacity, cleaned, prepared for operation.
Deluge Water Transfer System	X				Inspected, cleaned, prepared for operation
Communications System		X			Modified to accommodate Titan IV/Centaur
Utilities					Inspected, cleaned, prepared for operation
Water	X				
Electricity	X				
Propane	X				
Sewage Disposal	X				
Water Tank	X				Inspected, cleaned, prepared for use
Parking	X				Utilized in present configuration



LEGEND

- 1. SE PROPELLANT PADS
- 2. CONTAMINATED HYPERGOLIC WASTE TANK
- 3. PAYLOAD PREPARATION ROOM
- 4. ELECTRICAL SUBSTATION
- 5. PAYLOAD CHANGEOUT ROOM
- 6. OXIDIZER HOLDING AREA
- 7. OXIDIZER UNLOADING AREA
- 8. OXIDIZER VAPOR BURNER
- 9. LO₂ STORAGE TANK
- 10. GO₂ STORAGE
- 11. VAPORIZER PAD
- 12. LO₂ WASTE TANK
- 13. SSME EXHAUST DUCT
- 14. SRB EXHAUST DUCT
- 15. FACILITY VALVE PIT
- 16. LAUNCH MOUNT
- 17. ELECT. EQUIP. BLDG.
- 18. AIR CONDITIONING SHELTER
- 19. SHUTTLE ASSEMBLY BLDG.
- 20. ACCESS TOWER
- 21. SUPPORT EQUIP. BLDG.
- 22. COMPLEX SERVICE BLDG.
- 23. GAS STORAGE AREA
- 24. SLIDEWIRE EMERGENCY EGRESS LANDING AREA
- 25. FAN HOUSE
- 26. H₂ FLARE (SE)
- 27. H₂ VENT FLARE (SE)
- 28. EMERGENCY EGRESS GATE
- 29. LH₂ STORAGE AREA
- 30. FUEL UNLOADING AREA
- 31. READY BLDG.
- 32. LAUNCH CONTROL CENTER (V28)
- 33. MOBILE SERVICE TOWER
- 34. AIR INTAKE
- 35. FLAMMABLE STORAGE BLDG.
- 36. EMERGENCY POWER BLDG.
- 37. FUEL HOLDING AREA
- 38. GATE
- 39. GUARD SHELTER
- 40. PUMP HOUSE
- 41. SPACE SHUTTLE WATER STORAGE TANK
- 42. WASTEWATER TREATMENT FACILITY
- 43. OPERATIONS SUPPORT BUILDING
- 44. ICE SUPPRESSION SYSTEM BLDG.
- 45. JP-4 FUEL AREA

FIGURE 2.5

SLC-6 LAUNCH COMPLEX

TCLC FEDERAL CONSISTENCY DETERMINATION
ENVIRONMENTAL SOLUTIONS, INC.

SOURCE: USAF 1989a

natural gas, sewage disposal). The Personally Owned Vehicle (POV) parking area would remain in its present location northwest of the fenced launch site. Other systems built for the Space Shuttle, such as the Ice Suppression System (ISS) and Launch Control Center (LCC), would not be used for the Titan IV/Centaur. Also present at SLC-6 are several underground diesel fuel and jet fuel storage tanks. These tanks would have to meet all current regulations before being utilized for the Titan IV program.

9. Implementation of the TCLC at SLC-6 would involve demolition prior to construction of new project facilities and modification of existing facilities. The concrete and steel LM would be removed at the surface, producing approximately 1,200 tons of steel and 1,800 cubic yards of concrete. The access tower would be modified in accordance with Titan safety directives. Concrete from the LM would be disposed of at an approved VAFB spoil site, and steel would be salvaged for scrap. Demolition would be accomplished primarily by using jackhammers to crack the concrete and torches to cut through the steel reinforcing bars.
10. Subsequent to demolition, modification to existing facilities and construction of new facilities would begin. Overall, facility preparation is expected to occur over a period of four years. Demolition is expected to take about six months, with construction and modification of other facilities occurring over a 30-month period. Final preparation of aerospace equipment would occur during the final 12 months. Construction employment is expected to range from approximately 100 to 300 people, with an average over the four-year period expected to be about 200.
11. Automobile traffic is expected to average 200 cars per day, based on a worst-case assumption that every employee would drive one car to the site. A maximum of 300 cars per day may occur for a limited duration during peak construction. Truck traffic is estimated to reach a maximum of 35 to 40 trucks per day during the early part of construction, during demolition and site preparation, decreasing to about 20 to 30 trucks with the completion of construction.
12. The various Titan IV/Centaur space vehicle components would be shipped separately by air and rail to VAFB. Upon arrival, they would undergo a variety of receiving inspections and off-line processing before being transported to the launch pad for integration, test, and launch. Launch preparation activities involve assembly and testing of the Titan IV/Centaur vehicle. In appropriate sequence, the launch vehicle components, payload elements, and satellite would

be transported to the launch pad from their off-line processing areas or from their point of arrival at VAFB. They would then be assembled and tested at the launch site. Launch countdown activities would occur for a period of about two weeks.

13. As planned, a maximum of three vehicles per year would be launched from the TCLC for a minimum of 25 years.

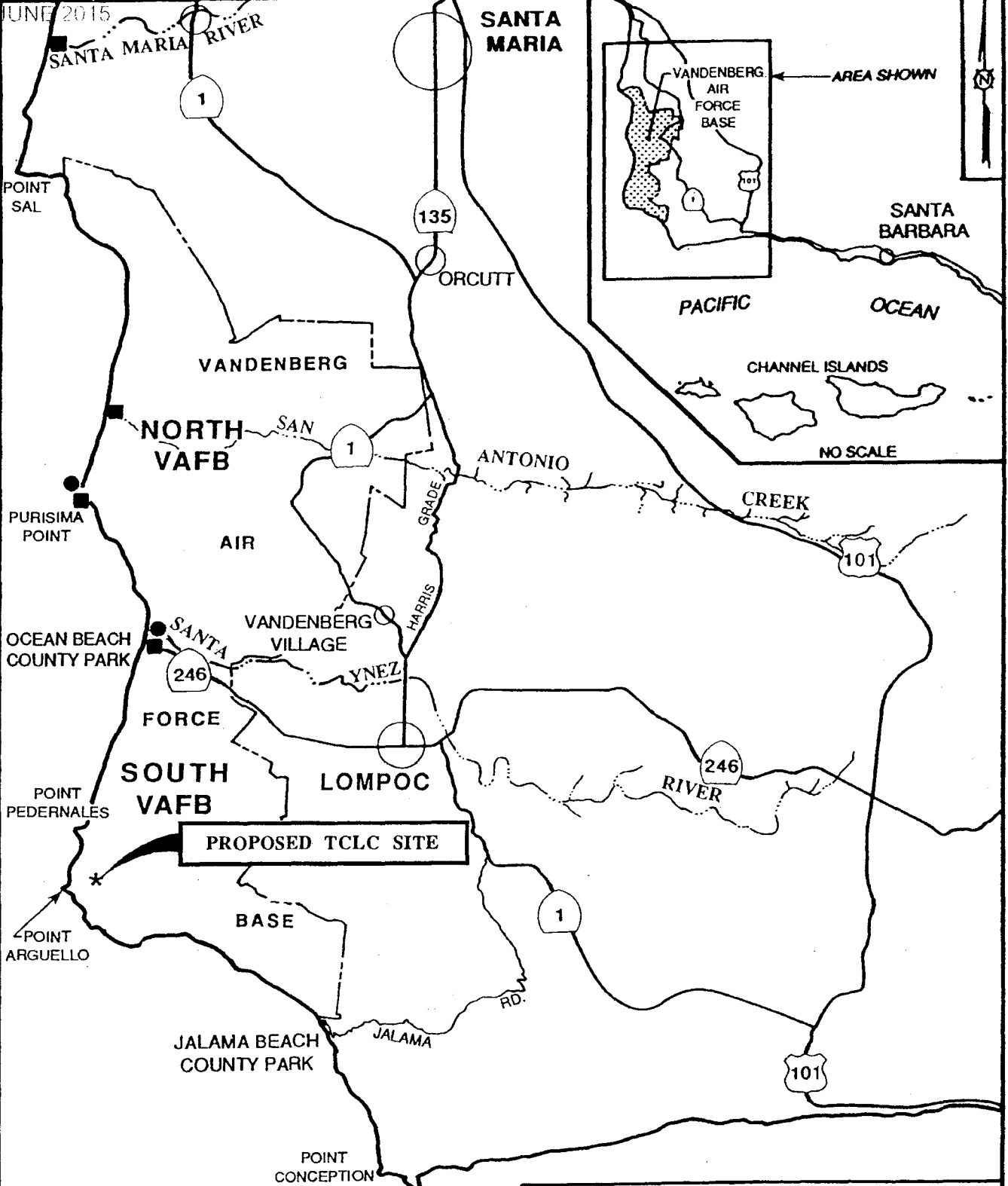
2.4 ENVIRONMENTAL SETTING

1. This section presents information describing the existing environment for resources of concern. The information contained here has been summarized from more detailed analyses contained in the Draft EIS (USAF 1989a) and the Biological Assessment (Environmental Solutions, Inc. 1990), which have been provided to the Commission.
2. The proposed action would be located within the California Coastal Zone and in an area approximately one mile from the Pacific Ocean. At the western-most termination of the Santa Ynez Mountains, the area is underlain by bedrock of the Monterey Formation and is at least 60 miles from the nearest potentially active fault. Surface and ground water resources in the vicinity are limited, consisting primarily of several perennial and ephemeral streams that drain directly into the ocean. Potable water is provided from the nearby Lompoc Terrace Aquifer, but useable quantities of ground water do not underlie the project area. The project region is generally arid, with average annual precipitation of about 16 inches per year. Stream flows depend primarily on rainfall, with relatively high yields during periods of precipitation due to the generally steep local topography.
3. The climate is Mediterranean, and the air quality is generally good, with the exception of infrequent occasions when ozone exceeds ambient air quality standards. This occurs primarily when meteorological conditions are such that pollutants generated in the Los Angeles basin are blown north to the project site.
4. The project area is located within a boundary zone between coastal southern and central California geographic provinces. At the southern end of the Coast Ranges and western end of the Transverse Ranges, the area supports various vegetation and animal species that have reached their northern, southern, or western limits and, for this reason, is of ecological and biogeographical interest. However, much of the local vegetation on South VAFB has been

modified or disturbed by humans over the past century. About two-thirds of the vegetation within the project area consists of central coastal scrub, with minor amounts of exotic species, wetlands, and riparian wetland.

5. Because of its coastal orientation, the potential project impact area supports animals of both terrestrial and marine species. In general, the wildlife community tends to be composed of common, wide-ranging reptile, amphibian, mammal, and bird species that frequent a variety of habitat types found throughout VAFB and adjacent areas. The badger (*Taxidea taxus*), a regionally rare mammal, and mountain lion (*Felis concolor*), a fully protected species in the state of California, may be expected to occur in the vicinity. Six species of birds that are federal- or state-listed or federal candidate species are known or expected to occur in the vicinity: California brown pelican, ferruginous hawk, American peregrine falcon, California least tern, Western snowy plover, and long-billed curlew (see Figure 2.6, Nesting Locations of California Least Tern and Western Snowy Plover). The unarmored three-spine stickleback, a federal- and state-listed endangered species, occurs in Honda Creek, about two miles north of the project area.
6. The Northern (Santa Barbara) Channel Islands are included in the study region. They occur beneath the space vehicle overflight area and could experience launch-related impacts, primarily sonic booms. In general, the Northern Channel Islands contain a depauperate animal population composed of species that are common and widespread along the mainland. The island fox, a state-listed threatened species, occurs on the largest islands. San Miguel Island is considered the largest marine mammal and seabird rookery site on the west coast of the United States (Engineering Science and Sea World Research Institute 1988). The island also contains an assemblage of caliche, a type of plant fossil in a stage of natural disintegration. Along the mainland shoreline of South VAFB are several haul-out areas for harbor seals, California sea lions, and occasional elephant and Northern fur seals. Harbor seals and California sea lions are the only pinniped species to use these hauling grounds as rookeries in the spring.
7. The visual environment in the vicinity of South VAFB is varied, characterized by rolling hills, valleys utilized for agriculture and grazing, and urbanization in the nearby Lompoc Valley. The topography is dominated by the east-west trending Santa Ynez Mountains, which narrow near the coast and terminate in the proposed project area. SLC-6 is at the western extreme of these mountains and slopes south onto an elevated marine terrace.

87-271-1 TCLC/FCD REV. 5/3/70



NESTING LOCATIONS

- WESTERN SNOWY PLOVER
- CALIFORNIA LEAST TERN

SOURCES: USAF 1987a;
PAGE AND STENZEL 1981.

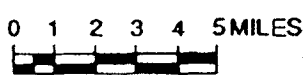


FIGURE 2.6
 NESTING LOCATIONS
 OF CALIFORNIA LEAST TERN
 AND WESTERN SNOWY PLOVER
 TCLC FEDERAL CONSISTENCY DETERMINATION
 ENVIRONMENTAL SOLUTIONS, INC.

8. The proposed project area is situated within a region rich in archaeological and historical resources. The archaeological record of the region spans a minimum of 9,000 years, culminating in the relatively complex Chumash Indian society, which was well established when Spanish explorers first arrived in 1769. There followed a period of colonization, with establishment of the mission system, then developments in ranching, farming, and transportation. Throughout, the Chumash have maintained their ethnic identity and are advocates for preservation of the Chumash culture.
9. The primary socioeconomic area of influence is the North County region of Santa Barbara County. Generally, North County employment is concentrated in agriculture, manufacturing, and government. VAFB is a major economic force, estimated to provide about two-thirds of local job opportunities. The North County is a growing area, in response to employment opportunities related to VAFB, the oil and gas industry, and as a bedroom community to the city of Santa Barbara.
10. The region surrounding the proposed project area is primarily undeveloped and rural. Sound levels measured for most of the region are low, with average Community Noise Equivalent Levels (CNEL) of about 40 to 45 dBA (average-weighted decibels). Higher levels appear in industrial areas and along transportation corridors. Land use both in the county and in the vicinity of VAFB consists primarily of agriculture/grazing and other undeveloped uses, plus a few urban areas, primarily the cities of Lompoc and Santa Maria. Land use on VAFB is mostly (97 percent) open space. Public recreation in the vicinity is limited and consists primarily of Jalama Beach County Park, adjacent to the south boundary of VAFB, and Ocean Beach County Park, at the mouth of the Santa Ynez River, about 7 miles north of the project site.
11. The transportation system affected by the proposed TCLC project would be primarily the highways in the vicinity of Lompoc and VAFB (State Highways 1 and 246) and surface streets in the city of Lompoc. The main transportation routes in the area connect with Highway 101, the main north-south transportation corridor in the region. Access to VAFB and the project site is provided by four gates and paved roadways through the base. In general, there is little traffic on VAFB roads.

3.0 POTENTIAL IMPACTS TO THE COASTAL ZONE

1. The material contained in this chapter is summarized from the Draft EIS (USAF 1989a) and the TCLC Biological Assessment (Environmental Solutions, Inc. 1990). Both documents have been provided to the Commission.
2. The proposed site for the TCLC project is within the coastal zone. Therefore, onsite construction and operations activities would occur within the coastal zone and could directly impact it. There also would be indirect effects to the coastal zone, such as from increased use of USAF and public beach and recreation areas, resulting from project-related population increases. The following summarizes project elements which could affect the coastal zone. They are addressed in greater detail in the Draft EIS and in Chapter 4.0 of this document, Data and Information in Support of Federal Consistency Determination.
3. Many of the potential impacts to the natural and human environments from the proposed construction and operation of the TCLC project would be minor, and most would be reduced to levels of insignificance through project design and/or application of existing state, federal, and USAF rules and regulations, and/or mitigation measures. Potential impacts to the natural environment of the coastal zone are related to vegetation, wildlife, water resources, air quality, noise, and visual resources. Potential impacts to the human environment, most of which would occur outside of the coastal zone, are related to waste management, health and safety, socioeconomics, and transportation. Potential effects to land use and recreation could occur both within and outside of local coastal zone boundaries.
4. Effects to wildlife and vegetation would result primarily from the operational effects of launch-related sonic booms which are expected to produce minor impacts to Channel Islands wildlife. Potential effects would be mitigated through the Threatened and Endangered Species (Section 7) Consultation process. Impacts to riparian areas resulting from project construction or operations are not anticipated.
5. Local and regional water resources would be affected by ground water withdrawal for project construction and operations needs and by domestic use for project construction and operations personnel and their families. Ground water basins supplying the regional and local environments are each independent. Increases in withdrawal from the aquifer supplying South VAFB and the project site during the four-year construction phase are not expected to significantly affect the local ground water table. Over the long-term, however, the

requirements of project operation would increase the existing demand by about 17 percent. This could result in an overdraft condition of the South VAFB aquifer, a significant local effect.

6. Potential air quality impacts during construction would largely be dust from demolition activities. Dust would be mitigated by utilizing onsite watering. During operations, there would be emissions of hypergolic fuel and oxidizer vapors, plus combustion products such as carbon monoxide (CO), sulfur dioxide (SO₂), nitrogen oxides (NO_x), and hydrocarbons (HC). These emissions would be permitted through the Santa Barbara County Air Pollution Control District and mitigated by control systems. The greatest source of emissions would be from vehicle launch, primarily hydrogen chloride (HCl) and aluminum oxide (Al₂O₃) from combustion of the solid rocket motors, and CO and NO_x from combustion of hypergolic fuels. Standard VAFB launch operational procedures would result in minimal migration of pollutants into inland uncontrolled areas near VAFB. The potential for a launch anomaly would produce similar emissions. Studies done in support of the TCLC Authority to Construct permit process indicate that the short duration and intermittent nature of TCLC activities would not measurably affect air quality.
7. Noise would occur primarily from normal launch events and result in noise levels of about 100 dBA at Lompoc and 90 dBA at Santa Maria, persisting for about 60 seconds. Due to its short duration, such noise would be characterized as a nuisance and would not be significant.
8. Development of the TCLC at SLC-6 would result in insignificant visual impacts, due to the developed nature of the site and the limited views of the area available to the public. SLC-6 is not visible from areas south of VAFB, including Jalama Beach.
9. Regional impacts to historic and prehistoric cultural resources are not expected. However, the caliche plant fossils on San Miguel Island may be affected by the shock from launch-induced sonic booms. Within the project vicinity, there could be effects to the historic former U.S. Coast Guard Rescue Station (Boathouse), and to a prehistoric Chumash rock art site. Most disturbance to the Boathouse and rock art site would result from launch-related vibration and acidic deposition. Potential impacts to the Boathouse would be mitigated with an accelerated maintenance program which would involve monitoring and repair of structures.

10. The extent of potential socioeconomic effects would depend on the number of persons who move to the area for the employment opportunities provided by implementation of the TCLC. In general, these impacts are expected to be beneficial to the growing North County area, and no mitigation measures are proposed. Potential transportation impacts to regional streets and highways also may occur, but these impacts would not be significant.
11. Land use and recreation impacts would occur as a result of activities being disrupted by launch events. These impacts would be primarily to offshore oil and gas extraction operations and shoreline and marine recreation. Such interruption would result from projected maximums of three launches per year from the TCLC and six per year from other VAFB SLCs. Local recreational areas would not be closed for more than a maximum of six days per year due to launches from the TCLC. Therefore, overall impacts would not be significant. Initial concerns were that agricultural areas having potential for residential use in areas within the coastal zone south of VAFB could be affected by launches from the TCLC. However, the USAF has concluded that development of privately owned properties south and east of VAFB would be incompatible with the future of space operations and safety at VAFB. Therefore, the USAF has begun a detailed study of the involved real estate interests in order to define potential land acquisition of affected private lands near VAFB.
12. The TCLC project would result in the generation of domestic, industrial, and hazardous wastes. There are USAF procedures for controlling waste generation and transport. Storage and treatment facilities with the capacity to accommodate these wastes are available on VAFB and elsewhere in the project region. Therefore, no effect to the coastal zone is anticipated.
13. Potential health and safety impacts are related to the possible occurrence of an accident within or in the vicinity of the coastal zone, involving hypergolic propellant transportation/storage and/or transportation and preparation of solid rocket motor upgrade (SRMU) segments. Rupture of hypergolic storage vessels could result in the release of toxic gases and the attendant possibility of explosion. However, hypergolic propellants have been shipped to VAFB since 1958, with no major accidents. An SRMU accident could result in ignition of the propellant and subsequent release of HCl, Al₂O₃, and heat, with attendant adverse health effects. Impacts related to either a normal launch or launch anomaly are not expected to be significant to local human populations.

4.0 DATA AND INFORMATION IN SUPPORT OF FEDERAL CONSISTENCY DETERMINATION

4.1 STATEMENT OF DETERMINATION

1. In accordance with the Federal Coastal Zone Management Act of 1972, as amended, the USAF has determined that the proposed establishment of the TCLC at VAFB is consistent to the maximum extent practicable with the California Coastal Act of 1976, as amended in January 1988. Compliance is discussed in relation to specific applicable provisions of the Act, as found in Chapter 3 - Coastal Resources Planning and Management Policies, Chapter 5 - State Agencies, and Chapter 7 - Development Control.
2. This determination of consistency with the California Coastal Act of 1976, as amended, is supported by the past Commission findings for the STS at SLC-6.
3. In 1982, USAF proposed the construction or modification of facilities at VAFB to accommodate launches of the STS from the west coast . The construction/modification of SLC-6 was determined by USAF to be consistent to the maximum extent practicable with the California Coastal Act of 1976 (Consistency Determination CD-21-82) (USAF 1982). The Commission issued a decision agreeing with the determination.
4. The finding of consistency for the STS sets a precedent to be considered by the Commission when reviewing this Consistency Determination since the proposed action uses the same facility, as modified, to fulfill the objectives of the TCLC project.

4.2 COMPLIANCE WITH THE CALIFORNIA COASTAL ACT

4.2.1 COASTAL RESOURCES PLANNING AND MANAGEMENT POLICIES

4.2.1.1 Public Access

Section 30210 -- Access, recreational opportunities, posting.

"In carrying out the requirement of Section 4 of Article X of the California Constitution, maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse. (Amended by Ch. 1075, Stats. 1978)."

1. Unlimited public beach access has, in the past, been provided on South VAFB via Ocean Beach County Park. Public access to the park from Highway 246 is posted at the Cabrillo Highway junction.
2. In response to Coastal Commission concerns for maintaining recreational access to beaches along the VAFB coastline, consistent with the need to maintain public safety and public rights, the rights of private property owners, and to protect natural resource areas from overuse, VAFB provides unlimited lateral beach access at two locations: (1) from Jalama Beach County Park, approximately one mile north to a natural rock outcropping barrier (public access to Jalama Beach County Park from Jalama Road is posted at the Highway 1 junction), and (2) at Ocean Beach County Park, extending approximately 3.5 miles south of the mouth of the Santa Ynez River and about 1.5 miles north, to a natural rock outcropping barrier (see Figure 4.1, Coastal Access: Vandenberg Air Force Base).
3. Restricted public access is also granted on North VAFB from Purisima Point south for a distance of about 3.5 miles. Public use of this area is by reservation for weekends and holidays. Access to the area is via the 13th Street Gate north of Highway 246. Fifty passes valid for an entire weekend or holiday period are provided on a first-come, first-served basis. Natural rock outcropping barriers and government property signs conspicuously delineate this restricted beach area.
4. There are about 9.5 miles of open and restricted areas of public beach access along the VAFB shoreline (Figure 4.1). Other areas on VAFB, including sensitive habitats, are also accessible, upon request, for scientific and educational purposes. Public access to these areas is recognized in VAFB Regulation 126.1 and is granted to beach areas only. Access to inland areas of VAFB is strictly prohibited for national and military security needs (see Sections 30212 and 30214). Access provided to VAFB beaches reduces potential project-related demand on other beaches in the local area.
5. VAFB also provides outdoor recreation facilities on lands owned by the USAF for military personnel and their families (see 30221, 30252).

Section 30211 -- Development not to interfere with access.

"Development shall not interfere with the public's right of access to the sea where acquired through use, or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation."

87-271-1 TCLC/FCD REV. 5/3/90

JUNE 2015

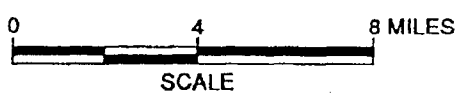
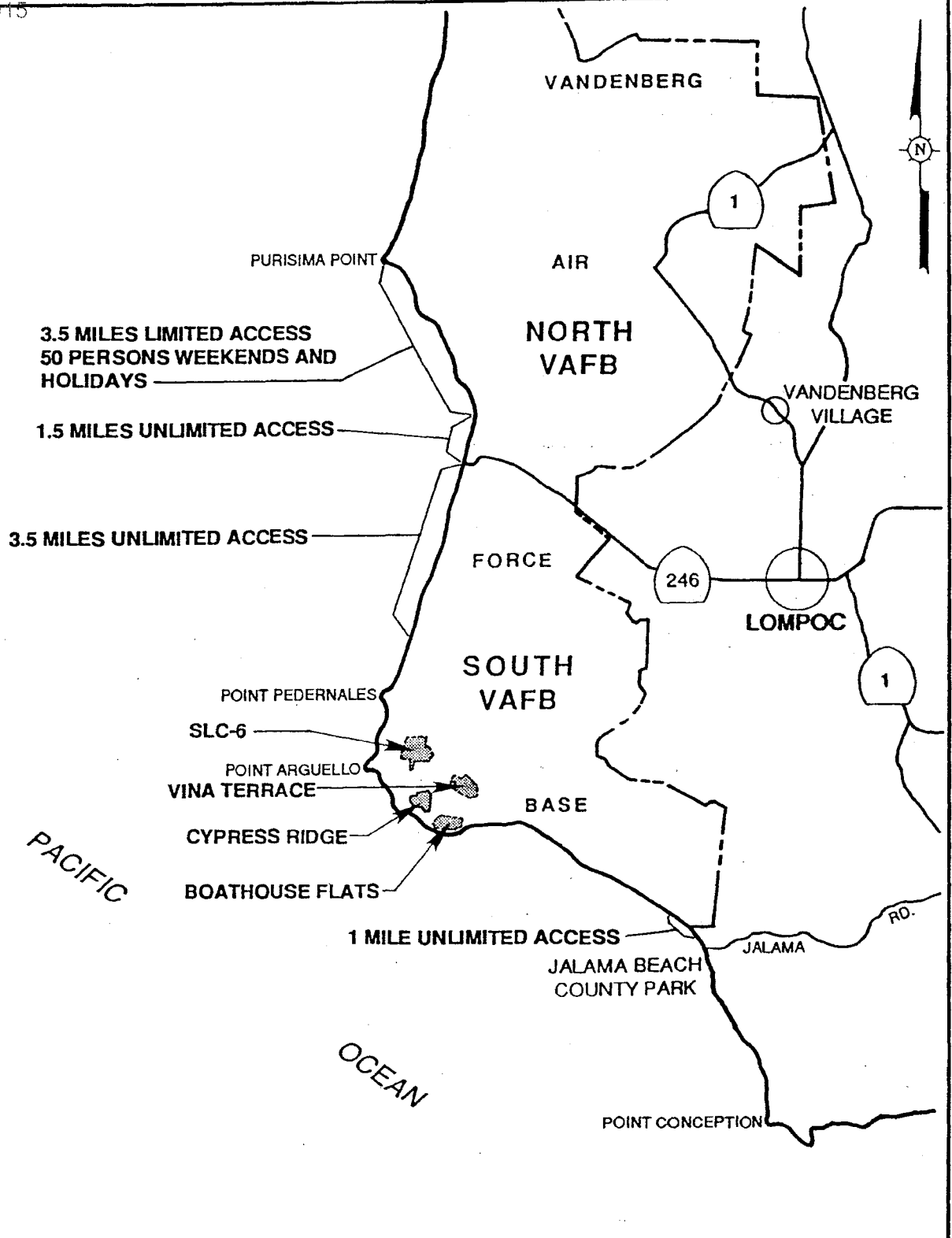


FIGURE 4.1
**COASTAL ACCESS
 VANDENBERG AIR FORCE BASE**
 TCLC FEDERAL CONSISTENCY DETERMINATION
 ENVIRONMENTAL SOLUTIONS, INC.

SOURCE: USAF 1982.

1. The TCLC project will not interfere with the public's right of access to the sea, as acquired through use or legislative authorization.
2. Access to Jalama Beach County Park is occasionally restricted in order to protect public health and safety during launches in a southerly direction from VAFB. Recent records show that USAF activities required Jalama Beach to be closed for two days during Fiscal Year 1987 (October 1986 to September 1987). USAF activities did not require the closure of Jalama Beach during Fiscal Years 1988 and 1989. The limited (two-day) closure occurred even though there were 20 launches in 1987, 13 launches in 1988, and 13 launches in 1989. It is not expected that access to Jalama Beach County Park would be restricted due to launches of small vehicles such as the Scout and commercial launches.
3. Implementation of the TCLC project at SLC-6 would require the closure of Jalama Beach no more than six days per year. This estimate is based on a projected maximum launch rate of three vehicles per year from the TCLC facility and on past launches, which have required no more than two days of closure per launch. The probability that a launch from the TCLC would require restricting access to Jalama Beach County Park during weekends is approximately one in three which, on the average, would result in the closure of Jalama Beach for two weekend days per year. The probability of a launch from the TCLC occurring during peak recreation season (June through August) is one in four. The peak recreation season is only long enough for one launch from the TCLC during a single year.
4. Implementation of the TCLC project at SLC-6 is the method adopted to minimize the project's adverse impacts on access. This method would result in a net reduction in potential access restrictions to Jalama Beach since it would no longer be possible to launch the STS from VAFB, a currently viable option. As found consistent with the California Coastal Act of 1976 as amended, STS operations were planned for 10 launches annually which could have resulted in an annual closure rate for Jalama Beach of 20 days per year (Consistency Determination CD-21-82) from USAF activities (USAF 1982). Using this baseline for comparison, implementation of TCLC at SLC-6 would result in a potential net reduction of restricted access to Jalama Beach of 14 days per year.

Section 30212 -- New development projects, provisions for access.

"(a) Public access from the nearest public roadway to the shoreline and along the coast shall be provided in new development projects except where (1) it is inconsistent with public safety, military security needs, or

the protection of fragile coastal resources, (2) adequate access exists nearby, or (3) agriculture would be adversely affected. Dedicated accessway shall not be required to be opened to public use until a public agency or private association agrees to accept responsibility for maintenance and liability of the accessway."

"(c) Nothing in this division shall restrict public access nor shall it excuse the performance of duties and responsibilities of public agencies which are required by Sections 66478.1 to 66478.14, inclusive, of the Government Code and by Section 4 of Article X of the California Constitution."

1. Restricted public access to the shoreline is provided in accordance with Section 30212(1). Lateral access with respect to beach areas identified above is pedestrian only. Using these areas for entrance to upland or inland areas of VAFB is strictly prohibited for national and military security reasons. The Titan and Scout vehicles and related facilities located on VAFB could be harmed by weapons fire as small as rifle shot. Military security experts have concluded that uncontrolled public access to these areas is an open invitation to foreign agents and saboteurs. Security considerations are important because they constitute the only protection the United States has for the resources located on VAFB. Whenever possible, USAF has taken measures to facilitate public access to the beaches along the VAFB shoreline by providing public access to Ocean Beach and Jalama Beach County Parks, to VAFB beaches through security police access points on a reservation basis, and by allowing the public in general to travel over VAFB roads in order to reach the state beach at Point Sal (see Figure 4.1). Further access would not allow USAF to maintain minimal levels of security.
2. Lateral public access also is controlled for reasons of public safety. At various times, launch-related risks exist in the beach areas between Ocean Beach and Jalama Beach County Parks. Risks include potential impacts from debris, as well as from firebrand, noise, and launch exhaust. Existing public access policy provides for control and evacuation procedures that include accountability of persons using these areas. Positive accountability and evacuation are necessary for public safety during certain launches (see 30211). Because the areas dedicated to public access are defined by natural physical barriers, USAF is able to achieve efficient evacuation prior to launches.
3. At various times, scientific research and educational groups take advantage of the undisturbed nature and sensitive wildlife habitats preserved along the VAFB coastline. Any changes in beach access procedures could impact endangered species and sensitive habitats which have been preserved along the coastline, in cooperation with the California Department of Fish and Game. The USAF has taken measures to maximize beach access while, at the same time,

providing protection for the military mission and natural resources. Due to the locations of shore access roads, additions to existing access policy would make possible public access to large areas of VAFB and impose an increased threat to habitats of sensitive species.

Section 30212.5--Distribution of public facilities.

"Wherever appropriate and feasible, public facilities, including parking areas or facilities, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area."

1. Public beach facilities adjacent to VAFB include those at Ocean Beach and Jalama Beach County Parks. According to the 1981 California Coastal Access Guide, Ocean Beach County Park consists of a 28-acre unimproved park on a broad beach area. Facilities include parking, picnic tables, barbecue fire pits, and pit toilets. Jalama Beach County Park, located north of Point Conception, is a 28-acre improved park on a broad beach area with coastal bluffs. The park provides parking, restrooms, 120 campsites, picnic tables, barbecue fire pits, hiking and equestrian trails, boating and fishing facilities, convenience store and snack stand, and facilities for the disabled. The provision of public access to the VAFB coastline reduces potential impacts of overcrowding and overuse, as discussed in Section 30250.

Section 30213--Development of low-cost facilities.

"Lower cost visitor and recreational facilities shall be protected, encouraged and, where feasible, provided. Developments providing public recreational opportunities are preferred."

1. By allowing lateral access from local county parks, VAFB provides low-cost recreational opportunities. These uses are encouraged, provided, and protected, as noted in Sections 30210, 30211, 30212 and 30212.5. A use fee is currently charged at Jalama Beach County Park, while free access is provided at Ocean Beach County Park.

Section 30214--Implementation of public access policies.

"(a) The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following: (1) Topographic and geologic site characteristics. (2) The capacity of the site to sustain use and at what level of intensity. (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area... (b) It is the intent of the Legislature that the public access policies of this article be carried out in a

reasonable manner that considers the equities and that balances the rights of the individual property owner with the public's constitutional right of access, pursuant to Section 4 of Article X of the California Constitution. Nothing in this section or any amendment thereto shall be construed as a limitation on the rights guaranteed to the public under Section 4 of Article X of the California Constitution. (c) In carrying out the public access policies of this article, the commission, regional commissions, and any other responsible public agency shall consider and encourage the utilization of innovative access management techniques, including, but not limited to, agreements with private organizations which would minimize management costs and encourage the use of volunteer programs (Amended by Ch. 919, Stats. 1979)."

1. As described in Sections 30210, 30211, 30212, 30212.5, and 30213, public access policy provisions in Article 2 of the California Coastal Act have been encouraged and implemented to the maximum extent possible. VAFB Regulation 126-1, August 2, 1982, as amended, establishes official policy, procedures, and responsibilities with respect to public access policies.

4.2.1.2 Recreation

Section 30220--Protection of water-oriented activities.

"Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses."

1. VAFB provides areas for water-oriented recreational activities. The public access and lateral beach use areas (see Figure 4.1) ensure, encourage, and protect unique coastal areas for both passive and active recreational activities such as sightseeing, hiking, biking, fishing, and picnicking, as well as scientific and educational activities. Due to the presence of strong currents and other dangerous conditions discussed in Section 30224, beaches along the VAFB coastline are considered unsafe for swimming and surfing. Accordingly, these activities are prohibited in beach areas to which USAF allows access. In the interest of public safety, beach activities on VAFB are monitored.
2. As proposed, the project would not affect the quality or configuration of local beaches. During actual launch events, expected to occur a maximum of three times per year, the local coastal area would be cleared of nonessential personnel. Otherwise, local coastal recreational areas would not be affected by project operations.

Section 30221--Protection of oceanfront land suitable for recreation.

"Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area."

1. Except during launch events, the oceanfront Boathouse area of South VAFB would not be affected in regard to recreational use by USAF personnel and their guests. Public access to the area would not be appropriate and is not provided by USAF. Public access to the shoreline along the bluffs would not be affected.

Section 30224--Encouragement of recreational boating use.

"Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land."

1. Although there is no marina development at VAFB, some private fishing and recreational boats from San Luis Obispo and Santa Barbara visit the area. Such use of coastal waters would not be impacted, except during launches (see Section 30211). Notice of a possible launch is posted in various ports and in the Notice to Mariners. On occasions that vessels are noted in the danger zone for a specific launch, USAF sends helicopters to notify the boat by loudspeaker and attempts to notify boaters by ship-to-shore communications to vacate the area. The probability of damage to vessels is small, but USAF attempts to eliminate this risk by prohibiting vessels from the area during launches.
2. The Boathouse External Tank Landing facility, which may be utilized for barge delivery of launch complex structures, was not intended for recreational use. Its design for use by shallow draft barges, plus normal conditions of prevalent fogs, rough water, and dangerous tidal rock outcroppings, precludes it from consideration as a safe harbor facility. In the past, the Point Arguello Boathouse was considered a harbor of refuge, and temporary tie-up for mariner emergencies and severe storm weather conditions will continue to be permitted.

4.2.1.3 Marine Environment and Habitat Resources

Section 30230--Maintenance of marine resources.

"Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes."

Section 30231--Maintenance of biological productivity, water quality.

"The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams."

Section 30240--Environmentally sensitive habitat area, adjacent developments.

"(a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on such resources shall be allowed within such areas.

"(b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade such areas, and shall be compatible with the continuance of such habitat areas."

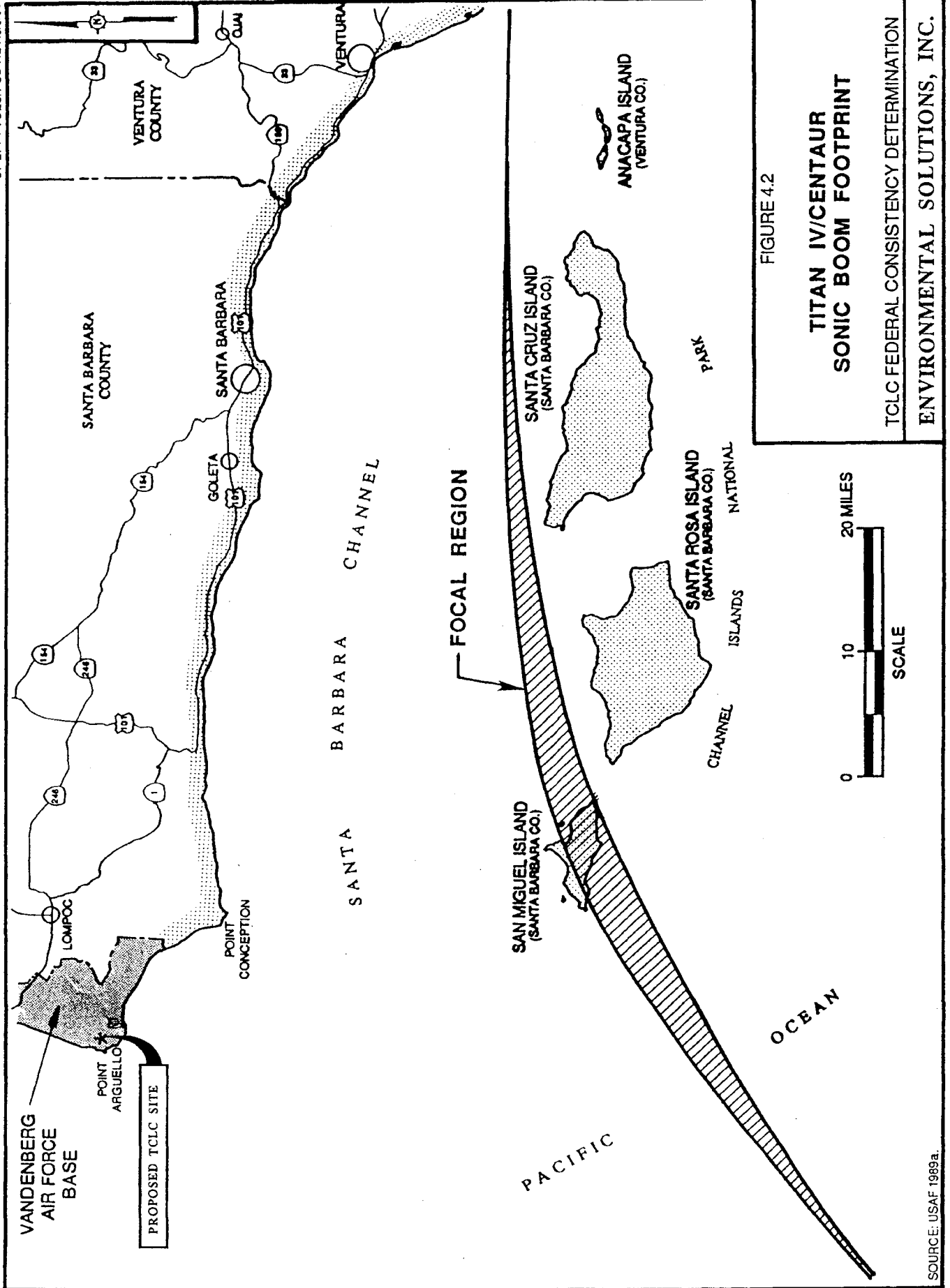
1. As a result of concern about the potential for sonic booms from launches from the TCLC to impact marine mammals and seabirds of the Northern Channel Islands, USAF conducted studies to assess the potential for impacts. This study is summarized in Appendix D of the TCLC Biological Assessment provided to the Commission (Environmental Solutions, Inc. 1990). In addition, informal and formal Section 7 consultations have been initiated with USFWS and National Marine Fisheries Service (NMFS) in compliance with the Marine Mammal Protection Act (MMPA) and the Endangered Species Act.
2. The results of this research effort indicate that there is little likelihood that sonic booms from TCLC launches would adversely impact marine mammal and seabird populations of the Northern Channel Islands. Data generated by using the Saber II Model indicate that Titan IV/Centaur sonic booms would add little to the level of disturbance on the islands and are unlikely to cause mortality of seabird eggs or chicks, serious startle of seabirds, impacts

on brown pelicans, physiological disruption to marine mammals, or significant mortality to marine mammal populations (see Figure 4.2, Titan IV/Centaur Sonic Boom Footprint). Sonic boom impacts from the Titan IV/Centaur are expected to be lower than those estimated for the STS since the intensity and frequency of the booms would be lower due to the smaller vehicle and lower launch rate.

3. As outlined in 50 CFR 228.4(a)(3) and (4), the MMPA requires that a permit be issued by the NMFS for the incidental taking of marine mammals. If necessary, USAF will obtain an appropriate "Incidental Take" permit prior to initiation of project operations. An Incidental Take permit would ensure that launch activities would not jeopardize the continued existence of endangered or threatened species or result in the destruction or adverse modification of habitat of such species. The progress of the action and impacts would be reported as per the requirements of the permit and in accordance with 50 CFR Part 222.23(d). If, during the course of the action, the amount or extent of the taking were to be exceeded, USAF would reinstate consultations immediately (50 CFR Part 402.14(i)(4)).
4. During the Environmental Impact Analysis Process for the Space Shuttle, the Commission staff expressed concern over the loss of intertidal habitat and the potential loss of a harbor seal haul-out area as a result of the dredging operation for the External Tank Landing facility at the Boathouse. Activities undertaken at this location during construction and operation of the TLC would be equivalent to ongoing maintenance procedures for SLC-6, i.e., periodic delivery of materials, and would be in compliance with activities established and permitted for the Space Shuttle. No new areas would be impacted.
5. Areas to the east and west of the external tank landing facility are periodically used for hauling out by harbor seals. These areas have received only semi-regular use by six or more individuals and are not considered to be critical use areas. Disturbance to animals utilizing areas adjacent to the Boathouse would be associated with times of human activity during the construction period and intermittently during project operations. Human interference would be minimized by restricting access by nonessential personnel. Harbor seals have shown resilience to human disturbances by adjusting their hauling-out behavior to avoid periods of human activity and, in the case of more extreme disturbances, by moving to areas further away. Other suitable hauling-out areas exist in proximity to the Boathouse. A hauling-out area at Point Conception is utilized continually by about 150 harbor seals.

NRO APPROVED FOR RELEASE
1 JUNE 2015

87-271-1 TCLC/FCD REV.5/3/90



SOURCE: USAF 1989a.

6. Confirmation of impacts to threatened and endangered species during construction and operations of the TCLC would be obtained through a monitoring program. The monitoring program would ensure compliance with conditions in a potential Incidental Take Permit (see above discussion of Incidental Take Permit) and ensure the effectiveness of mitigation measures stipulated during Section 7 consultation.
7. The structure and content of the monitoring program would be developed in consultation with U.S. Fish and Wildlife Service (USFWS) and NMFS. This "team" approach to program development ensures that the program would address marine mammal species and issues of concern and has been agreed to in concept by USFWS and NMFS. An important part of the monitoring program is the ongoing Sea World Research Institute effort which is designed to gather baseline animal behavior data prior to and after launches. These data will be used to monitor changes in pinniped and sea bird populations and mortality trends that may result from space launches and to build a predictive model to forecast future animal abundance.
8. Implementation of the TCLC at SLC-6 would not require the construction of utility corridors or other facilities that would directly impact wetland areas. Runoff from the project site and the impacts to wetlands associated with runoff would be minimized since ground-disturbing activities are not contemplated. Erosion that does occur would be controlled to the extent possible during and after construction in accordance with requirements of an Erosion Control and Restoration Plan that would be prepared for the proposed project and available to the public.
9. Launch wastewater would be treated at the SLC-6 wastewater treatment plant, utilizing ultraviolet ozonization (if available and necessary), and disposed of in the existing evaporation ponds. No launch or other wastewater would be discharged to grade or to the ocean.
10. Domestic wastewater would be discharged to the existing sanitary sewer and treatment facility, located on SLC-6 (see Figure 2.5). The facilities would be operated in compliance with the Report of Waste Discharge Permit as administered by the Regional Water Quality Control Board.

11. The following are some examples of prescribed construction mitigation measures that would be taken to avoid adverse impacts to wetlands, streams, and canyons. These measures would be incorporated into contract specifications.

- Design and construction shall be planned and implemented for containment and control of runoff.
- The construction contractor shall locate temporary facilities and perform construction operations within areas designated on construction maps. Further, facilities and operations shall be located and performed such that environmentally significant areas are not degraded.
- The construction and operating contractors shall institute adequate measures for storage and disposal of debris and other waste products. Storage and disposal of debris shall be in accordance with applicable codes and according to plans submitted to and approved by the Contracting Officer.
- Upon completion of construction within a nonoperational site area, that area shall be returned to its preconstruction or natural state including:
 - Preservation of natural drainage channel.
 - Removal and/or replacement of excavated material.
 - Resloping and grading.
 - Revegetation with approved natural or noncompetitive species.

12. SLC-6 is located approximately two miles from Honda Creek, a habitat for the endangered (federal- and state-listed) unarmored three-spined stickleback. A detailed analysis of the potential effects of acidic deposition from rocket exhaust products during launch was undertaken in support of the Biological Assessment (Environmental Solutions, Inc. 1990). This analysis used water quality data gathered from three nearby streams (since none are available for Honda Creek) and worst-case assumptions regarding acidic deposition. The nearby streams are similar to Honda Creek in that they rise in the same area and flow through the same geologic structures. This is supported by similarities in water quality parameters found in the three streams. The analysis showed that the buffering capacity of the water is significantly (approximately 100 times greater) greater than that required for complete neutralization of the acid. A 1976 report indicates that the natural buffering capacity of Honda Creek is as much as twice as great as that assumed in the analysis (Columbe and Cooper 1976). As a result, significant impacts to the unarmored three-spined stickleback are not expected.

Section 30232--Oil and hazardous substance spills

"Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that occur."

1. Protection from the accidental spillage of oil, gas, petroleum products, or other hazardous substances is provided for in the VAFB Spill Prevention Control and Countermeasures Plan and in the Toxic and Hazardous Waste Management Operations Plan (USAF 1989b). Further protection is afforded by the requirement that construction contractors have spill contingency plans in place prior to construction.
2. Launch deluge water (wastewater) will be treated at the SLC-6 wastewater treatment plant, utilizing ultraviolet ozonization if necessary, and disposed of in the existing evaporation ponds. Treatment methodology will be approved by the Regional Water Quality Control Board, the U.S. Environmental Protection Agency (EPA), and the California Department of Health Services. Hazardous wastes generated by the TCLC will be collected for disposal off of VAFB.
3. During launches from the TCLC, USAF will advise oil companies operating offshore of the need to evacuate oil platforms considered to be at risk from the launch. According to oil industry representatives, prior to evacuation of a platform, the wellbore will be closed and capped and the blow-out prevention equipment on the ocean floor and the platform will be activated to prevent a spill. In addition, not all personnel would be evacuated. A skeleton crew trained in fire fighting, damage control, and spill response would remain on the platform and be in a shelter for approximately 12 minutes at the time of the launch. Personnel remaining on the rig could promptly respond to emergencies utilizing onboard equipment and, if necessary, request assistance from shore-based support services.

Section 30233 Diking, filling, or dredging

"(a) The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects, and shall be limited to the following...

"(2) Maintaining existing, or restoring previously dredged, depths in existing navigational channels, turning basins, vessel berthing and mooring areas, and boat launching ramps..."

1. No dredging is anticipated to be necessary to support the TCLC for the next ten years. If dredging should become necessary, a consistency determination would be prepared and submitted in accordance with the Federal Coastal Zone Management Act of 1972, as amended.

4.2.1.4 Land Resources

Section 30241--Prime agricultural land, maintenance in agricultural production.

"The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses..."

1. Large agricultural areas, including prime, open space, and grazing lands, exist on VAFB and throughout the region. These act to form a buffer between the base and nearby urban areas. The TCLC project would have no direct impact to prime agricultural lands on VAFB. Further, the TCLC program would encourage the continued use of lands in the vicinity of the launch site for agricultural purposes, as such lands are essential to launch safety as buffer areas.

Section 30244--Archaeological or paleontological resources.

"Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required."

1. The archaeological landscape in the vicinity of the TCLC project is rich and varied. The USAF has identified archaeological resource areas through archival and literature searches, an intensive surface inventory, and consultation with the VAFB base archaeologist, local Native American groups, and qualified archaeologists. The definition and protection of known and unknown historic properties is a consideration of the TCLC project.
2. If the proposed project is implemented as proposed at SLC-6, impacts to archaeological or paleontological resources would be minimized, since ground-disturbing activities are not anticipated. Documentation of project effects would be coordinated through the State Historic Preservation Officer (SHPO) and the Advisory Council on Historic Preservation (ACHP), as appropriate. Property treatment, if required to mitigate potential adverse effects, would be coordinated through the SHPO and ACHP. The treatment plan will include the consideration of significant properties which may be discovered during construction and will provide for the monitoring of archaeologically sensitive areas by one or more qualified archaeologists and Native American Monitors.

4.2.1.5 Development

Section 30250--Facilities Location

"(a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels."

1. Development of the TCLC project will involve certain growth-related impacts outside the boundaries of VAFB, including population in-migration and related demands for housing and associated services in the communities of north Santa Barbara County. Research indicates that temporary housing for an estimated maximum of 300 construction workers is available.
2. For potential new operations employees, adequate housing and/or developable land are available within the nearby communities of Lompoc and Santa Maria. Growth associated with the proposed project could be accommodated with utilization of existing systems, as the area currently is in a growth mode. There is a concern regarding water supply, as the source of water for these communities is currently in overdraft. It is estimated that, as a worst case, population increase associated with TCLC employment could result in a 0.2 percent increase over 1988 water use. Although small, this would be an increase to an existing overdraft condition and, therefore, would be considered significant. However, it is not expected to affect the coastal zone. Water requirements of the project itself would affect the aquifer that supplies South VAFB, increasing demand by about 17 percent and resulting in this water supply being in an overdraft condition of approximately 45 acre-feet per year.

Section 30251--Scenic and visual qualities.

"The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas..."

1. Implementation of the TCLC project at SLC-6 would not significantly affect the scenic and visual qualities of the coastal zone near VAFB. SLC-6 is an existing launch complex which is situated so that it is not visible from high-use areas such as Jalama Beach and Ocean Beach County Parks (see Figure 2.4). While some existing structures would be replaced or modified at SLC-6 (see Section 2.3), the changes would have minimal impacts on natural landforms and would not significantly alter SLC-6's visual presence in the regional environment.

Section 30252--Maintenance and enhancement of public access.

"The location and amount of new development should maintain and enhance public access to the coast by... (6) assuring the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development."

1. USAF provides outdoor recreation lands and facilities for its population of military personnel and their families, employed civilians and, in special cases, other agency and contractor personnel. Outdoor recreation facilities and lands owned by USAF satisfy a portion of the recreation needs of its personnel, but USAF is not self-sufficient in meeting its recreation requirements. An estimate of the outdoor recreation needs of USAF personnel and their families met by on-base land and facilities varies from base to base but is usually less than 50 percent (USAF 1982). Thus, USAF personnel seek additional recreational opportunities provided by local and state agencies and the private sector. These include winter sports, scenic areas such as State and National Parks, primitive wilderness areas, wild and scenic rivers, and ocean recreation such as fishing, boating, surfing, and swimming.
2. There are numerous inland areas, as well as various beaches and coastal-related recreation facilities, on VAFB which are for military use and reduce the demand for off-base recreational facilities. The temporary and permanent personnel to be employed for the TCLC would account for a relatively small portion of the total recreational demand related to VAFB operations.
3. It is estimated that population increases of less than 0.5 percent would occur in the Santa Maria and Santa Ynez Valleys as a result of the proposed project. This new population would be expected to utilize public inland and coastal recreational facilities within the North County area. Other than during holiday periods, nearby coastal recreation areas are not fully utilized, so population related to the TCLC would not be expected to overload existing facilities.

Section 30253 (2)--Safety, stability, pollution, energy conservation, visitors.

"New development shall...

"(2) Assure stability and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs."

1. Implementation of the proposed action at SLC-6 would minimize potential erosion and geologic impacts since it is an existing facility and additional ground-disturbing activities are not contemplated. During project operations, the existing paved drainage control system would minimize erosion over the long term.
2. There is some potential for sonic booms to cause disturbance to the caliche forest on San Miguel Island. This fragile resource is constantly undergoing degradation from naturally occurring processes such as wind, thunder, rain, and earthquakes. Impacts of sonic booms are not expected to differ in magnitude from these natural forces, although they may cause an accelerated rate of caliche decay. Mitigation for a process that occurs naturally and results in continuous weathering and destruction of the resource is not practicable.

Section 30253 (3)--Consistency with local and state air pollution jurisdictions.

"New development shall...

"(3) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Control Board as to each particular development."

1. A major emphasis of the Clean Air Act is that prevention and control of air pollution at its source is the primary responsibility of state and local governments. It delegates authority for regulation of National Ambient Air Quality Standards (NAAQS) and hazardous emissions to states and local areas with programs that have been approved by the EPA.
2. The Santa Barbara County Air Pollution Control District (SBCAPCD) has an EPA-approved State Implementation Plan (SIP) which authorizes it to regulate new sources of air pollution within the district. Regulation is primarily done through a permitting program which requires an applicant to obtain an Authority to Construct (ATC) prior to construction of a new or modified source of air contaminant emissions and a Permit to Operate (PTO) prior to operation

modified source of air contaminant emissions and a Permit to Operate (PTO) prior to operation of a new or modified emissions source. Granting an ATC is contingent upon the findings of an air quality impact evaluation termed "New Source Review" (NSR), which is performed to determine whether the proposed new or modified source has the potential to violate SBCAPCD, California Air Resources Board (CARB), or EPA-established standards for ambient air quality. Therefore, compliance with SBCAPCD rules and regulations ensures compliance with the requirements of CARB, the EPA, and the Clean Air Act.

3. Consultations with SBCAPCD regarding permitting compliance have been ongoing since 1988. The proposed TCLC project would be constructed and operated in accordance with all applicable SBCAPCD, CARB, and EPA rules and regulations. While there are no permitting requirements for emissions from the launch vehicle (it is not a stationary source), an ATC permit for construction activities and ground support systems must be obtained prior to conversion of SLC-6 for the TCLC and a PTO obtained prior to operation of the launch complex.

Section 30254--Public works facilities.

"New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; provided, however, that it is the intent of the Legislature that State Highway Route 1 in rural areas of the coastal zone remain a scenic two-lane road. Special districts shall not be formed or expanded except where assessment for, and provision of, the service would not induce new development inconsistent with this division. Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal-dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development."

1. The cumulative effect of the TCLC and other VAFB-related projects would result in increased demands for various public services, such as education, water, wastewater treatment, public health, and safety. The TCLC project would not require direct expansion or preclude essential public works facilities. Additional discussion is contained in sections on water, wastewater treatment, public access, recreation, and socioeconomics.

4.2.2 STATE AGENCIES

Section 30414--State Water Resources Control Board and regional water quality control boards.

"(b) The State Water Resources Control Board and the California regional water quality control boards are the state agencies with primary responsibility for the coordination and control of water quality..."

1. USAF will obtain permits from the Regional Water Quality Control Board, Central Coast Region, for the SLC-6 storage/evaporation ponds.

Section 30414--State Air Resources Board and local air pollution control districts.

"(a) The State Air Resources Board and local air pollution control districts established pursuant to state law and consistent with requirements of federal law are the principal public agencies responsible for the establishment of ambient air quality and emission standards and air pollution control programs. The provisions of this division do not authorize the commission or any local government to establish any ambient air quality standard or emission standard, air pollution control program or facility, or to modify any ambient air quality standard, emission standard, or air pollution control program or facility which has been established by the state board or by an air pollution control district."

1. An air pollutant emissions inventory and an Air Quality Impact Analysis (AQIA) for the TCLC would be completed preparatory to the ATC application which would be submitted to SBCAPCD. An air quality monitoring program for criteria pollutants, with one station in Lompoc, is ongoing as part of the county's overall basin monitoring system.

4.2.3 DEVELOPMENT CONTROL, GENERAL PROVISIONS

Section 30607.1--Wetlands dike and fill development, mitigation measures.

"Where any dike and fill development is permitted in wetlands in conformity with this division, mitigation measures shall include, at a minimum either acquisition of equivalent areas of equal or greater biological productivity or opening up equivalent areas to tidal action; provided, however, that if no appropriate restoration site is available, an in-lieu fee sufficient to provide an area of equivalent productive value or surface areas shall be dedicated to an appropriate public agency, or such replacement site shall be purchased before the dike or fill development may proceed. Such mitigation measures shall not be required for temporary or short-term fill or diking; provided, that a bond or other evidence of financial responsibility is provided to assure that restoration will be accomplished in the shortest feasible time."

1. There would be no dikes or fills in wetlands and no destruction of wetland habitat as a result of the proposed action (see Section 4.2.1.3). In general, interference with other natural drainage systems would be minimized by using existing drainage systems to the maximum extent practicable and by avoidance of temporary drainage interference during construction.

Section 30610--Coastal development permit requirements.

"Notwithstanding any provision in this division to the contrary, no coastal development permit shall be required pursuant to this chapter for the following types of development and in the following areas...

"(c) Maintenance dredging of existing navigation channels or moving dredged material from such channels to a disposal area outside the coastal zone, pursuant to a permit from the United States Army Corps of Engineers.

"(d) Repair or maintenance activities that do not result in an addition to, or enlargement or expansion of, the object of such repair or maintenance activities; provided, however, that if the commission determines that certain extraordinary methods of repair and maintenance that involve a risk of substantial adverse environmental impact, it shall, by regulation, require that a permit be obtained under this chapter..."

1. No dredging related to the TCLC would be expected for the next ten years. If dredging should become necessary, a consistency determination would be prepared and submitted in accordance with the Federal Coastal Zone Management Act of 1972, as amended. In addition, a permit would be obtained from the U.S. Army Corps of Engineers for transport of the dredged material to an appropriate site.

5.0 ACRONYMS AND ABBREVIATIONS

ACHP	Advisory Council on Historic Preservation
AFS	Air Force Station
Al ₂ O ₃	Aluminum Oxide
APCD	Air Pollution Control District
AQIA	Air Quality Impact Analysis
ATC	Authority to Construct
CARB	California Air Resources Board
CNEL	Community Noise Equivalent Levels
CFR	Code of Federal Regulations
CO	Carbon Monoxide
dBA	Average Weighted Decibels
DOD	Department of Defense
EIAP	Environmental Impact Analysis Process
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
GO ₂	Gaseous Oxygen
H ₂	Hydrogen
HC	Hydrocarbons
HCl	Hydrogen Chloride
ISS	Ice Suppression System
JP-4	Jet Fuel
LCC	Launch Control Center
LD	Launch Duct
LH ₂	Liquid Hydrogen
LM	Launch Mount
LO ₂	Liquid Oxygen
MMPA	Marine Mammal Protection Act
MST	Mobile Service Tower
MOL	Manned Orbital Laboratory
N ₂ O ₄	Nitrogen Tetroxide
NAAQS	National Ambient Air Quality Standards
NMFS	National Marine Fisheries Service
NO _x	Nitrogen Oxides
NOAA	National Oceanic and Atmospheric Administration

NSR	New Source Review
NUS	No Upper Stage
OSB	Operations Support Building
PCR	Payload Changeout Room
POV	Personally Owned Vehicle
PPR	Payload Processing Room
PTO	Permit to Operate
SBCAPCD	Santa Barbara County Air Pollution Control District
SAB	Shuttle Assembly Building
SE	Support Equipment
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SLC	Space Launch Complex
SO ₂	Sulfur Dioxide
SRB	Solid Rocket Booster
SRMU	Solid Rocket Motor Upgrade
STS	Space Transportation System
TCLC	Titan IV/Centaur Launch Complex
USAF	United States Air Force
USFWS	United States Fish and Wildlife Service
VAFB	Vandenberg Air Force Base

6.0 REFERENCES

- California Coastal Commission. 1988. California Coastal Act of 1976, as amended January 1988. January.
- California Coastal Commission. n.d. Federal Consistency in a Nutshell: A Guide Concerning the Operation of the Federal Consistency Provisions of the Coastal Zone Management Act of 1972, as Amended.
- Columbe and Cooper. 1976. Ecological Assessment for Vandenberg Air Force Base. Center for Regional Environmental Studies, San Diego State University.
- Engineering Science and Sea World Research Institute (ES/SWRI). 1988. Biological Assessment for the Titan II and Titan IV Space Launch Vehicle Modifications and Launch Operations Programs, Vandenberg Air Force Base, California. Technical Report Prepared for U.S. Air Force, Headquarters, Space Division, Los Angeles, California. PS019.03.
- Environmental Solutions, Inc. 1990. Biological Assessment, Titan IV/Centaur Launch Complex, Vandenberg Air Force Base, California. March.
- Page, G. W. and L. E. Stenzel. 1981. The breeding status of the Snowy Plover in California. *Western Birds* 12:1-40.
- United States Air Force (USAF). 1982. Coastal Consistency Determination, Space Shuttle Program, Vandenberg Air Force Base, California. Submitted by U.S. Air Force, Headquarters, Space Division, Los Angeles, California. September.
- United States Air Force (USAF). 1987. Draft Environmental Impact Statement for the Mineral Resource Management Plan, Potential Exploration, Development, and Production of Oil and Gas Resources, Vandenberg Air Force Base, California. June.
- United States Air Force (USAF). 1988a. Environmental Assessment for the Titan IV Space Launch Vehicle Modification and Operations, Vandenberg Air Force Base, California. February.
- United States Air Force (USAF). 1988b. Operations Concept, SLC-7 Titan IV/Centaur Launch Vehicle. Generated by WSMC/ST. March 24.
- United States Air Force (USAF). 1989a. Draft Environmental Impact Statement, Construction and Operation of Space Launch Complex 7, Vandenberg Air Force Base, California. July 20.
- United States Air Force (USAF). 1989b. Spill Prevention Control and Countermeasures (SPCC)/Oil and Hazardous Substance Contingency Plan (OHSCP) Plan, Vandenberg Air Force Base, California. July.