

**CALIFORNIA COASTAL COMMISSION**

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**RECORD PACKET COPY****STAFF REPORT AND RECOMMENDATION****ON THE INITIAL PHASE CONSISTENCY DETERMINATION**

Consistency Determination No. **CD-049-98**  
Staff: JRR-SF  
File Date: 4/10/1998  
45th Day: 5/25/1998  
60th Day: 6/9/1998  
Commission Meeting: 5/12/1998

**FEDERAL AGENCY: U.S. AIR FORCE****DEVELOPMENT****LOCATION:**

Vandenberg Air Force Base, Santa Barbara County (Exhibits 1 and 2)

**DEVELOPMENT****DESCRIPTION:**

Evolved Expendable Launch Vehicle Program (Exhibits 3, 4, 5, and 6)

**SUBSTANTIVE FILE DOCUMENTS:**

1. Draft Environmental Impact Statement for the Evolved Expendable Launch Vehicle Program, December 1997.

**EXECUTIVE SUMMARY**

The U.S. Air Force proposes to develop and deploy the Evolved Expendable Launch Vehicle (EELV) systems. The EELV family of vehicles will consist of two

configurations of medium lift vehicles and two configurations of heavy lift vehicles (Exhibit 4). The medium vehicles would use one booster and the heavy lift vehicles would use the same rocket as the medium lift vehicle with two additional boosters. The Air Force intends to use this program to replace current Atlas IIA, Delta II, Titan II, and Titan IVB launch vehicles. Launch capabilities will be developed by two contractors, Lockheed Martin and Boeing, at existing launch facilities, SLC 3W and SLC 6, South Vandenberg Air Force Base (VAFB).

The proposed launch program will require temporary closures of public beach for protection of public safety during launches. The Air Force will close beaches for a minimum of two hours during a launch, if launch trajectory and weather require it. Because of limited availability of public beaches in northern Santa Barbara County, these closures are a significant issue. However, the Air Force proposes to minimize the impact by limiting the number of launches per year and considering access impacts in its scheduling decisions (i.e., attempt to avoid launches during holiday weekends and minimize the number of launches during summer months). Additionally, since the EELV program will replace existing launch activities, which also require beach closures, it will not significantly change the current beach closure requirements. Therefore, the EELV is consistent with the access and recreation policies of the California Coastal Management Program (CCMP).

Although, as currently proposed, the project does not include wetland fill, the original consistency determination for this project included the construction of a road that would result in such fill. The Air Force has withdrawn the road from Commission consideration at this time. The Air Force intends to re-evaluate the need for the road and, if necessary, provide the Commission with additional information to support either a finding of consistency with Section 30233(a) of the Coastal Act or a finding that the activity meets the maximum extent practicable standard. If necessary, the Air Force will evaluate the wetland fill in a phased consistency review of the project.

The original consistency determination for the EELV provided for dredging of existing channels to support barge transportation of rocket components. The consistency determination lacked information on grain size, chemical characteristics of the sediment, and disposal site location. Because of these concerns, the Air Force agreed to provide phased consistency review of the dredging after it collects this information.

The proposed launch sites are near habitat for several federally listed endangered and threatened species. The Air Force concludes, in its consistency determination, that the launch activities will not have significant impacts on these species. However, the Air Force has not completed its consultation with the U.S. Fish and Wildlife Service (Service) pursuant to Section 7 of the Endangered Species Act. Normally, a consistency determination without such an analysis would not contain enough information to evaluate the project for consistency with the CCMP. However, in this case, there are several

extenuating circumstances. First, the EELV launches are similar to other launch programs on south VAFB. The Air Force has consulted with the Service for these programs and none of these other consultations have resulted in a jeopardy opinion. Additionally, these consultations have required monitoring, which has not shown a significant adverse effect on listed species. Second, the EELV launch program will replace existing launch programs, and thus there will be little net new impacts to these species. Finally, the Air Force has agreed to submit the final analysis of endangered species impact, which would include the Section 7 consultation, as part of its phased consistency determination. With these considerations, this initial phase of the consistency determination is consistent with the endangered species policies of the CCMP.

The EELVs are design to use cleaner burning fuels. Therefore, they will reduce the air and water quality impacts from the current launch vehicles. Finally, the EELV will use safety measures required for other rocket operations to minimize an oil spill resulting from debris hitting an oil platform caused by launch accident. Therefore, the project is consistent with air quality, water quality, and oil spill policies of the CCMP.

## **STAFF SUMMARY AND RECOMMENDATION:**

### **I. Project Description.**

The U.S. Air Force proposes to develop and deploy the Evolved Expendable Launch Vehicle (EELV) systems. The EELV family of vehicles will consist of two configurations of medium lift vehicles and two configurations of heavy lift vehicles (Exhibits 7 and 8). The medium vehicles will use one booster and the heavy lift vehicles would use the same rocket as the medium lift vehicle with two additional boosters. The Air Force proposes to use this system to replace current Atlas IIA, Delta II, Titan II, and Titan IVB launch systems (Exhibit 9). The EELV systems will meet the requirements of the U.S. government space launch needs for both medium and heavy lift, at a lower launch cost than the present expendable launch systems. EELV systems will provide capabilities to launch Department of Defense, National Aeronautics and Space Administration, and commercial payloads to orbit through the year 2020.

The Air Force proposes to develop two different EELV systems at two separate VAFB launch sites. Under the first system, the Air Force will implement the EELV using vehicles developed by the Lockheed Martin Corporation with launch operations at the 33-acre SLC-3W on South VAFB (Exhibit 3). The Air Force has previously used SLC-3W for Atlas D/Agenda launches (1960-1963), for Thor Agenda launches (1963-1972), and for Atlas E/F launches (1972-1995). Currently, SLC-3W is inactive and requires minimal maintenance. Construction activities will begin in 2000 and the Air Force has scheduled the first launch for 2001. The Air Force will confine all construction activity to previously disturbed areas within VAFB.

In the second program, the Air Force will implement the EELV using vehicles developed by the Boeing Company, with launch operations conducted at the 100-acre SLC-6 at South VAFB (Exhibit 5). SLC-6 was originally constructed in 1970 for the Titan IIIM launch vehicle. After the Air Force canceled that program, it modified SLC-6 for the Space Shuttle program, but it was never used for that purpose. Athena launch activities currently occupy a small portion of the SLC 6 complex. Some of the other facilities are currently being used by the California Commercial spaceport and a launch contractor. The Air Force will begin construction activities in 1998, with the first launch scheduled for 2001. The Air Force will confine all construction activity to previously disturbed areas within VAFB.

## **II. Status of Local Coastal Program.**

The standard of review for federal consistency determinations is the policies of Chapter 3 of the Coastal Act, and not the Local Coastal Program (LCP) of the affected area. If the Commission certified the LCP and incorporated it into the CCMP, the LCP can provide guidance in applying Chapter 3 policies in light of local circumstances. If the Commission has not incorporated the LCP into the CCMP, it cannot guide the Commission's decision, but it can provide background information. The Commission has not incorporated the Santa Barbara County LCP into the CCMP.

## **III. Federal Agency's Consistency Determination.**

The Air Force has determined the project to be consistent to the maximum extent practicable with the California Coastal Management Program.

## **IV. Staff Recommendation:**

The staff recommends that the Commission adopt the following motion:

MOTION. I move that the Commission concur with the Air Force's consistency determination.

The staff recommends a YES vote on this motion. A majority vote in the affirmative will result in adoption of the following resolution:

### **A. Concurrence.**

The Commission hereby **concurs** with the consistency determination made by the Air Force for the proposed project, finding that the project is consistent to the maximum extent practicable with the California Coastal Management Program.

## V. Findings and Declarations:

The Commission finds and declares as follows:

A. Public Access. Section 30210 of the Coastal Act provides that:

*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.*

Section 30220 of the Coastal Act provides that:

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

Section 30221 of the Coastal Act provides that:

*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.*

The proposed project involves launches from two locations, SLC-3W and SLC-6. Depending on the trajectory, launches from SLC-3W (Exhibit 10) could require closures of both Jalama Beach County Park and Ocean Beach County Park. Additionally, launches from SLC-6 (Exhibit 11) could require the closure of Jalama Beach. These beaches are two of only four public beaches within the 64-mile stretch of northern Santa Barbara County: Gaviota Beach, Jalama Beach, Ocean Beach, and Point Sal.

Jalama Beach is an important public recreational resource because of its upland and water-oriented recreational values and scenic resources. It is popular for surfing and wind surfing and used by people from all over the state. The Commission's California Coastal Resource Guide also describes this area as a popular fishing spot: "*An offshore reef protects the nearshore waters from turbulent wave action, creating a popular sport fishing ... spot.*" In addition, there are 100 overnight camping sites at Jalama Beach. The sandy beach and estuary along Jalama Creek provide ample opportunity for the public to bird watch, walk, and passively enjoy coastal resources. The scenic resources of Jalama Beach provide a unique place to enjoy coastal recreational resources.

Additionally, Ocean Beach is an important recreation area. Ocean Beach is a popular recreation destination for the local community. It is probably the primary public beach for people in the Santa Ynez Valley, including the City of Lompoc, and other communities in northern Santa Barbara County. Additionally, this beach is a popular fishing area for both the local community and for visitors from outside the County.

Because these beaches provide unique recreational opportunities and are one of the few places along the northern Santa Barbara County coast that provides for public access, the Commission has concerns about the potential impact on the recreational use of the beach from the proposed project. Existing space launch activities at Vandenberg Air Force Base result in temporary closures of public beaches in this area.

Space Launch Complex/Vehicles and Resulting Beach Closures

LAUNCH COMPLEX AND VEHICLES		BEACH CLOSURE STATUS	
		Ocean	Jalama
SLC-2W	Delta II	All launches	Open
LSC 576-E	Taurus SLV	Open	Open
SLC-3E	Atlas II	All launches	Open
SLC-4E	Titan IV	All launches	All launches*
SLC-4W	Titan II	All launches	All launches*
SLC-6	Athena	Open	Low azimuth**
SLC-3W	EELV-Con. A	All launches	Low azimuth
SLC-6	EELV-Con. B	Open	Low azimuth
SLC-3W	EELV-Con. A/B	All launches	Low azimuth
SLC-6	EELV-Con. A/B	Open	Low azimuth

\* Closed for all launches beginning in 1997; previously closed only for low azimuth launches.

\*\* None projected.

The Air Force closes these beaches for public safety reasons. If an accident occurs or the Air Force must destroy the vehicle during its take off, debris could crash on these beaches. In its consistency determination, the Air Force describes the public safety issue as follows:

*Currently, all launches are carried out in accordance with required ground, range, and flight safety regulations of the Air Force at VAFB. For public safety, closure of some portions of the Coastal Zone during certain launch operations are mandated by the Air Force Safety Officer in coordination with local and state agencies. These beach closures are required to insure that no one remains within the identified impact debris corridor during a launch. Debris impact corridors are established based on the location of the launch site, the characteristics of the launch vehicle, its planned flight trajectory, and weather conditions at the time of launch. The debris impact corridor is the zone within which debris from an*

*aborted or failed launch would impact. If a launch vehicle deviates from its planned trajectory beyond an acceptable limit, flight controllers activate the vehicle's onboard self destruct mechanism to terminate the flight and prevent the vehicle from endangering the public. The debris impact corridor is designed to encompass debris that would fall to the ground in such a scenario.*

*Beach closures for launch vehicle activity last for approximately 3 to 4 hours per closure under normal conditions. The Air Force and Santa Barbara County officials work together in a collaborative effort to ensure that necessary areas are cleared prior to launches. On the day of launch, the Air Force's safety requirement is that the affected beach areas be cleared by approximately 60 minutes prior to launch (T-60). In order to accommodate this requirement, park rangers generally begin clearing the beaches around two to three hours prior to launch with roadblocks put in place at T-90 minutes. Weather and/or mechanical problems can extend or cause additional periods of beach closure when they cause slips in the launch schedule during the final countdown. However, beaches are not closed at all when the delay initiates before the opening of this window. Closures at Jalama Beach County Park can be longer during night launches. Since overnight camping is allowed there, park rangers generally close Jalama at dusk to ensure that all campers are evacuated and the area is cleared prior to the launch.*

*EELV launches will operate under safety procedures governed by the same rules and regulations as current programs. Beach closure practices associated with the EELV systems will be very similar to current programs.*

In the past, the Commission has had significant concerns about public beach closures in this area. The Commission has generally agreed that beach closures are necessary part of the space launching activities at Vandenberg and the Commission has generally supported these space launching activities. However, in evaluating these activities, the Commission usually requires some mitigation for the beach closures. This mitigation is usually a limitation on the number of launches annually and other measures designed to reduce the significance of the impact. These other measures have included commitments to avoid weekend launches, especially holiday weekends, and minimizing the number of launches occurring during the peak recreation season (usually May through September). Additionally, although not required in the past, the Commission believes that there is some value for the applicant to provide to the Commission annual reports on the beach closures resulting from its launch activities.

With respect to the proposed EELV program, as with other programs, the Commission has concerns about the access impact. However, in this case, the Air Force proposes to replace existing governmental launch vehicles with the EELV. (For commercial launches, the Air Force does control the type of launch vehicle used. However, the Air Force argues that the EELV will be less expensive to operate, and thus the preferred vehicle for commercial launches.)

**Future VAFB Space Launch Schedule**

LAUNCH VEHICLE	LAUNCHES/YEAR				
	FY 98	FY 99	FY 00	FY 01	FY 02
Titan II	1	1	1	0	0
Titan IV	1	1	2	1	1
Atlas II	1	0	2	1	1
Delta II	8	2	5	0	0
Taurus	2	1	1	0	0
Athena	2	1	0	0	0
Medium EELV	0	0	0	2	6
Heavy EELV	0	0	0	2	0
<b>TOTAL</b>	<b>15</b>	<b>6</b>	<b>11</b>	<b>6</b>	<b>8</b>
BEACH	CLOSURES/YEAR				
	FY 98	FY 99	FY 00	FY 01	FY 02
Ocean (Surf)	11	4	10	4	5
Jalama	2	2	3	4	6
<b>TOTAL</b>	<b>13</b>	<b>6</b>	<b>13</b>	<b>8</b>	<b>11</b>

Regardless of whether the Air Force uses the EELV or an existing vehicle, the needs of the payload, and not by the needs of the vehicle, drive the launch rate. In other words, the number of satellites proposed drives the launch rate and the uses of EELV will not change the number of satellites. Therefore, the addition of the EELV will not affect the launch rate at Vandenberg. Exhibits 12 and 13 shows the launch rate for the EELV. In summary, the Air Force expects an average of eight launches per year with a maximum of 14 launches, which includes both government and commercial launches. Additionally, the Air Force commits to resubmitting the EELV program to the Commission if the launch rates exceed its estimates and results in impacts to coastal resources (Exhibit 14).

Finally, the Air Force has modified its consistency determination to include mitigation measures that would limit or reduce the significance of the beach access impacts. Specifically, the Air Force has agreed to consider access impacts among those issues it will evaluate in determining launch schedule. For example, the Air Force will attempt to avoid holiday weekends and minimize the number of launches during the summer months. Additionally, the Air Force will monitor beach closures and provide an annual report to the Commission. The monitoring will provide data on the number of launches that included beach closures, the location of the closure, and the duration of each closure.



Exhibit 14 shows these commitments. Therefore, the Commission finds that, with these modifications, the proposed EELV program is consistent with the public access policies of the CCMP.

**B. Wetland Resources.** Section 30233(a) of the Coastal Act provides that:

*(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:*

*(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*

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

*(3) In wetland areas only, entrance channels for new or expanded boating facilities; and in a degraded wetland, identified by the Department of Fish and Game pursuant to subdivision (b) of Section 30411, for boating facilities if, in conjunction with such boating facilities, a substantial portion of the degraded wetland is restored and maintained as a biologically productive wetland. The size of the wetland area used for boating facilities, including berthing space, turning basins, necessary navigation channels, and any necessary support service facilities, shall not exceed 25 percent of the degraded wetland.*

*(4) In open coastal waters, other than wetlands, including streams, estuaries, and lakes, new or expanded boating facilities and the placement of structural pilings for public recreational piers that provide public access and recreational opportunities.*

*(5) Incidental public service purposes, including but not limited to, burying cables and pipes or inspection of piers and maintenance of existing intake and outfall lines.*

*(6) Mineral extraction, including sand for restoring beaches, except in environmentally sensitive areas.*

*(7) Restoration purposes.*

*(8) Nature study, aquaculture, or similar resource dependent activities.*

Originally, the proposed project included 0.03 acres of wetland fill. Although this is not a significant amount of habitat loss, the Air Force did not initially provide enough information for the Commission to evaluate the project's consistency with the wetland policies of the CCMP. Specifically, the modifications to the existing facility at SLC-3W included the construction of a second access road. That new road would have filled 0.03 acres of wetland. In its consistency determination, the Air Force describes the impact as follows:

*Under Concept A and Concept A/B, construction plans for a road at SLC-3W may affect the edge of a willow wetland. The portion of wetland affected measures less than 0.03 acres. The wetland exists in a drainage originally constructed as a part of SLC 3W. The road that affects the wetland is required from an operational and safety standpoint to provide an additional point of entry into the launch pad area. Rerouting the road to avoid the wetland would require construction in undisturbed Coastal Sage Scrub habitat that is present along the banks of a steep ravine located just outside the fence-line of the SLC. Construction in this area would require substantial disturbance and placement of fill in the ravine. Construction at the SLC's has generally been confined to previously disturbed areas within the fence-line of the existing complexes to avoid disturbance of the biological and cultural resources which exist at VAFB. Due to the size of the potentially impacted wetland (less than three acres), it qualifies for Nationwide Permit 14 for road crossings. Impacts to the wetland will be mitigated in accordance with permit requirements.*

Section 30233 of the Coastal Act provides three tests by which the Commission must evaluate wetland fill projects: allowable-use, alternatives, and mitigation tests. With respect to the first test, Section 30233 identifies eight allowable activities that can result in wetland fill. It appears that none of the allowable uses apply to this proposed road. Additionally, the Air Force did not provide enough information to demonstrate that the proposed road is the least damaging feasible alternative. Finally, although the Air Force stated that it would mitigate for the fill, it did not provide any details on that mitigation.

In response to these concerns, the Air Force agreed to withdraw the road from the Commission's consideration at this time (Exhibit 14). The Air Force proposes to reconsider the need for the proposed road. If it concludes that the road is necessary, the Air Force will provide additional information to demonstrate that the road is either consistent with Section 30233(a) of the Coastal Act or that the maximum extent practicable standard in the Coastal Zone Management Act applies in this case. Since the

Air Force, as described below, proposed to conduct phased consistency review for the proposed project, it will bring the road back to the Commission, if it is still necessary, as part of the Air Force's phased consistency review. With this modification, the proposed project does not include any wetland fill at this time.

C. **Dredging.** Section 30230 of the Coastal Act provides that:

*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 30233(a) provides, in part, that:

*(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:*

*(1) New or expanded port, energy, and coastal-dependent industrial facilities, including commercial fishing facilities.*

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

....

Section 30233(b) of the Coastal Act provides:

*(b) Dredging and spoils disposal shall be planned and carried out to avoid significant disruption to marine and wildlife habitats and water circulation. Dredge spoils suitable for beach replenishment should be transported for such purposes to appropriate beaches or into suitable long shore current systems.*

The Air Force proposes to ship supplies and rocket components supporting launch activities at SLC-6 to an existing harbor at Boathouse Flats (Exhibits 1 and 2). The

channels supporting this harbor requires maintenance dredging to allow this shipping operation. The Air Force's consistency determination includes this dredging, approximately 20,000 cubic yards, as part of the project. However, the Air Force has not provided the Commission with an evaluation of the dredging to a level of detail that would allow the Commission to analyze it for consistency with the Coastal Act.

The proposed dredging is an allowable use pursuant to Section 30233(a) of the Coastal Act because it will maintain an existing channel (Section 30233(a)(2)). However, the consistency determination does not contain enough information to evaluate the dredging for consistency with the other requirements of Section 30233(a), Section 30230, and Section 30233(b). In evaluating dredging projects, the Commission requires the federal agency to adequately characterize the sediments. Specifically, the federal agency would provide, at a minimum, bulk chemistry and grain size analysis of the sediment proposed for dredging. This information is necessary for the Commission to evaluate the water quality, habitat, and sand supply impacts from the proposed project.

The Air Force's consistency determination does not include any of this information. Additionally, in its consistency determination, the Air Force states that it intends to re-use the material for beach replenishment purposes by disposing of the sediment into the nearshore environment. However, the Air Force has not identified a disposal site or a receiver beach. Therefore, the Commission cannot evaluate the impacts from dredging and dredge material disposal. Based on these concerns, the Air Force modified its consistency determination to propose phased consistency review for the dredging (Exhibit 14). With this phase, the Air Force submits a conceptual plan for dredging and will bring the final dredging project to the Commission after the Air Force completes its data gathering and analysis and disposal site selection. Since dredging is an allowable use, the Commission finds that the conceptual plan for dredging is consistent with the CCMP. However, the issues raised by disposal site selection and sediment characterization are important issues that the Air Force will need to address at the later phase.

**D. Habitat.** Section 30230 of the Coastal Act provides that:

*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 30240(b) of the Coastal Act provides that:

*(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 those areas, and shall be compatible with the continuance of those habitat and recreation areas.*

**1. Marine Mammals.** In past projects, the Commission has raised concerns about potential impacts on marine mammals from launch activities at Vandenberg. The marine mammals that are found in this area include California sea lions, northern fur seal, northern elephant seal, and harbor seals. The species most likely to be affected are sea lions, which use various beaches in the Rocky Point area for haulouts, and harbor seals, which use the Purisma Point for haulout. Additionally, the northern Channel Islands, which are potentially affect by the program, provide habitat for all of these species.

The proposed launch activities could affect these species through launch noise and sonic booms. In its consistency determination, the Air Force describes the potential effects as follows:

***Concept A: SLC-3W***

***Noise and Sonic Boom Environment:*** Both launch noise surrounding the SLC and sonic boom were modeled for all variants of the Concept A vehicle during preparation of the EIS for the EELV program. Noise levels at key pinniped haul-out sites along the coast ranged from 80 to 85 dBA at Rocky Point and 75 to 80 dBA at Purisima Point. The lower levels were associated with the medium vehicle and the higher levels with the heavy vehicle. Modeling results indicate that sonic booms may affect one or more of the Channel Islands, depending on the vehicle type and trajectory. Maximum modeled sonic boom focal zones that may affect the islands range from less than one to as much as six psf [pounds per square foot], depending on vehicle type and trajectory.

***Launch Noise Effects:*** Launches from the SLC-3W launch site would cause a startle response at Purisima and Rocky Points haul-out areas, with a slightly greater effect at Rocky Point. Current launch noises as low as 80 dBA have been shown to cause pinnipeds on land to flee to the water, but no abandonment of the haul-out areas or impacts on the species' survival has been observed. These effects would be temporary and minor.

***Sonic Boom Effect:*** As stated above, sonic boom overpressures could impact on portions of the Channel Islands with overpressures of as much as six psf, or the boom could miss some islands entirely. Titan IV vehicles

*launched from SLC-4E created focused sonic booms over the northern Channel Islands but showed a lack of significant impact to biota of San Miguel Island (Versar, 1991). None of the studies summarized in the Final Programmatic EA for the Marine Mammal Take Permit showed injury or pup abandonment during all levels of dB and sonic boom overpressures observed from any launch site, although temporary abandonment of haul-out places were of a longer duration for those areas receiving higher dBA (Tetra Tech, Inc., 1997).*

*Launch noises on cetaceans appear to be somewhat attenuated by the air/water interface. The cetacean fauna in the area have been subjected to sonic booms from military aircraft for many years without apparent adverse effects (Tetra Tech, Inc., 1997).*

**Concept B: SLC-6**

*Noise and Sonic Boom Environment: Both launch noise surrounding the SLC and sonic boom were modeled for all variants of the Concept B vehicle during preparation of the EIS for the EELV program. Noise levels at key pinniped haul-out sites along the coast ranged from more than 85 dBA at Rocky Point (for both the medium and heavy vehicles) to 70 to 75 dBA at Purisima Point. The lower levels were associated with the medium vehicle and the higher levels with the heavy vehicle. Operations at the South VAFB boat dock will cause noise within the immediate area of approximately 85 dBA over a three day period for up to four times per year while the common booster cores for the launch vehicle are off-loaded from the barge.*

*Modeling results indicate that sonic booms may affect one or more of the Channel Islands, depending on the vehicle type and trajectory. Maximum modeled sonic boom focal zones that may affect the islands range from less than one to as much as seven psf, depending on vehicle type and trajectory.*

*Launch Noise Effects: Launches from the SLC-6 launch site would cause a startle response at Purisima and Rocky Points haul-out areas, with a substantially greater effect at Rocky Point. Current launch noises as low as 80 dBA have been shown to cause pinnipeds on land to flee to the water, but no abandonment of the haul-out areas or impacts on the species' survival has been observed. These effects would be temporary and minor.*

***Sonic Boom Effects:** As stated above sonic boom overpressures could impact on portions of the Channel Islands with overpressures of as much as seven psf, or the boom could miss some islands entirely. Titan IV vehicles launched from SLC-4E created focused sonic booms over the northern Channel Islands but showed a lack of significant impact to biota of San Miguel Island (Versar, 1991). None of the studies summarized in the Final Programmatic EA for the Marine Mammal Take Permit showed injury or pup abandonment during all levels of dB and sonic boom overpressures observed from any launch site, although temporary abandonment of haul-out places were of a longer duration for those areas receiving higher dBA (Tetra Tech, Inc., 1997).*

***Boat Dock Operations Noise:** Operations at the boat dock would cause intermittent, temporary disturbance to sensitive and listed species that utilize the harbor, including brown pelican, sea otters, and harbor seals. Although the species may avoid using the harbor during operations, the harbor area is not expected to be abandoned by these species because of EELV activities.*

The Air Force has monitored effects on the marine mammals for many years and there is no indication of any long-term effects on these species. This monitoring will continue under the EELV program. Therefore, the Commission finds that the project will not significantly affect marine mammals.

**2. Threatened and Endangered Species.** Vandenberg Air Force Base provides habitat for several federally listed threatened and endangered species (Exhibit 15). Those species located near or potentially affected by the proposed EELV program include the California least tern, Pacific Coast population of the western snowy plover, peregrine falcon, unarmored threespine stickleback, California red-legged frog, California brown pelican, least Bell's vireo, and southern sea otter.

The proposed project will not result in any direct loss of habitat for listed species. However, indirect impacts from launch noise and emissions may affect these species. The Air Force usually evaluates these impacts in its consultation with U.S. Fish and Wildlife Service pursuant to Section 7 of the Endangered Species Act. However, the Air Force has not completed its consultation with the Service. Despite this lack of analysis, the Commission recognizes that the Air Force has evaluated these endangered species issues in previous federal consistency reviews and Section 7 consultations. Through these past reviews, the Service has required monitoring and mitigation. Although the monitoring has shown that the launch activities have short term effects on the listed species, there is no evidence of significant permanent effects. In these past reviews, the

Air Force mitigated the endangered species impacts through such measures as monitoring, predator control, and human access control.

In its consistency determination for the proposed project, the Air Force describes the effects to endangered species and proposed mitigation as follows:

*Impacts to threatened, endangered, or sensitive species from construction of facilities or from a launch are not expected to jeopardize the existence of any species considered during the EELV analysis. A summary of impacts to listed species and potential mitigation measures that may be implemented to ensure protection of listed species are as follows:*

*Brown pelicans, peregrine falcons, least terns, southwestern willow flycatchers, snowy plovers, and red-legged frogs on or in the vicinity of VAFB could be disturbed due to launch noises or launch exhaust associated with EELV vehicles.*

*The Western snowy plover, the brown pelican, the peregrine falcon, and the red-legged frog (at SLC-6 evaporation ponds) would be monitored to assess individual and cumulative impacts for EELV launches from SLC-6. For launches from SLC-3, the above species, except for the red-legged frog, would also be monitored. Monitoring at SLC-3 will also include southwestern willow flycatcher and least tern.*

The Commission agrees that the likely impacts to listed species from the proposed launch program will be similar to previous launch programs. It is likely that launch noise and exhaust will have some impact on these species. The degree of impact depends on the frequency of launches and the type of vehicles used (larger vehicles will have more noise and air pollution). However, the Commission must analyze its concern about potential impacts to listed species considering that the program will replace existing launch activities.

Even in the context of these previous launch programs, the Commission has concerns about the incomplete evaluation of the endangered species impact from this project. Most of that analysis will occur through its coordination with the Service. That process will also provide mitigation and monitoring requirements for any impacts. Since the Air Force has not completed this consultation process, the Commission does not have the benefit of the data, mitigation, and monitoring results from that process. In most circumstances, the Commission would object to a consistency determination without the complete endangered species analysis. However, in this case there are extenuating circumstances. As described above, the Air Force has thoroughly analyzed potential impacts to endangered species in previous space launch programs. Additionally, the proposed EELV will replace those launch programs. Finally, the Air Force has agreed to



a phased review process that would include resubmitting the project for review of the endangered species impacts after the completion of the Section 7 process (Exhibit 14). In other words, the endangered species analysis in this consistency determination is a preliminary review based on previous projects and the final review will occur after completion of the Air Force's consultations with the Service. This phased review process would allow the Commission full review of the endangered species impacts with the possibility of objecting to the project if the Commission finds that any endangered species impacts are not consistent with the CCMP. Under these circumstances, the Commission finds that, based on its preliminary review of endangered species impacts, the project is consistent with the habitat policies of the CCMP.

**D. Air Quality.** The Coastal Act contains several air quality provisions. Section 30253(3) of the Coastal Act states in part, that:

*New development shall ... [b]e consistent with the requirements imposed by an air pollution control district of the State Air Resources Control Board as to each particular development.*

Section 30414 provides:

*(a) The State Air Resources Board and 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.*

*(b) Any provision of any certified local coastal program which establishes or modifies any ambient air quality standard, any emission standard, any air pollution control program or facility shall be inoperative.*

*(c) The State Air Resources Board and any air pollution control district may recommend ways in which actions of the commission or any local government can complement or assist in the implementation of established air quality programs.*

Additionally, Section 307(f) of the Coastal Zone Management Act incorporates federal, state, and local provisions established pursuant to the Clean Air Act into state coastal management programs.

Pursuant to the Clean Air Act, the state has established programs to attain and maintain national ambient air quality standards adopted by the Environmental Protection Agency (EPA). Under the State Health and Safety Code, the State Air Resources Board (ARB) and local air pollution control districts implement this responsibility. EPA reviews those rules to determine that they are consistent with the Clean Air Act. Pursuant to the Clean Air Act and the State Health and Safety Code, the state may adopt more stringent standards for certain pollutants than those under federal law.

Air pollution levels above both the designated federal and state ambient air quality standards threaten public health. The federal standard for ozone is 12 parts per hundred million (pphm), while the state standard is 9 pphm. State and federal law require the local Air Pollution Control Districts (APCDs) (usually counties) to establish air quality programs, which include rules and regulations for the attainment and maintenance of both the federal and state ozone standards and other standards within their districts.

The project is within Santa Barbara County, which does not meet several established air standards. The State has classified the County as non-attainment for both state and federal ozone standards (O<sub>3</sub>), as well as for the state fine particulate matter standard (PM<sub>10</sub>, 24 hour standard).

Santa Barbara County APCD requirements that may be applicable to the project include: consistency with Air Quality Attainment Plan provisions, consistency with Health and Safety Code provisions, compliance with District New Source Review, Prevention of Significant Deterioration, and any other rules listed in any APCD's Final Authority to Construct permit program that might be required. Upon exceeding certain thresholds, or "trigger" levels, these rules generally require reduction of pollutants, Best Available Control Technology, and offsets for residual emissions. However, under the APCD's existing rules, the proposed project does not exceed any of these trigger levels.

The major activities involving air emissions from this project are construction activities and the rocket launches. In its consistency determination, the Air Force describes the Air Quality impacts as follows:

*Estimates of air emissions due to construction and operation of the proposed action concepts indicates that implementation of any of the proposed action concepts will not jeopardize the attainment status of criteria pollutants in Santa Barbara County. Santa Barbara County is in non-attainment of the National Ambient Air Quality Standards for ozone. Consequently, the estimated emissions of ozone precursors (nitrogen oxides and volatile organic compounds) due to the EELV concepts were compared with the appropriate federal de minimis thresholds at which a*

*conformity determination would be required. Total emissions of ozone precursors under all concepts were found to be below the de minimis threshold of 50 tons per year. Therefore, no conformity determination was required for the EELV program. In addition, EELV is not considered regionally significant since its total emissions of any criteria pollutant are far less than ten percent of Santa Barbara County emissions. While there would be a short-term increase in emissions due to EELV construction activity, long-term estimates indicate a decrease in total emissions due to the phase-out of other government launch vehicles as EELV is implemented.*

The construction activities fall within the regulatory authority of the APCD, which will evaluate the air quality impacts from the construction activities and, if necessary, require appropriate mitigation. The APCD does not have regulatory authority over launch activities because they are mobile sources. In analyzing launch emissions, the applicant notes the primary pollutants for most of the launch activities are nitrogen oxides. Most of the existing launch vehicles currently use solid fuel. The liquid fuel used in most of the EELV will significantly reduce the emissions from the launch activities. The solid fuel vehicles are more polluting than the EELV with the primary emissions being particulates, nitrogen oxides, and hydrochloric acid. The Air Force's uses a model (Rocket Exhaust Effluent Diffusion Model) to estimate launch "hold" criteria, to assure that the project does not pose any health risks. Under these criteria launches will not be allowed under certain atmospheric conditions. The applicant will conduct rocket launches in accordance with safety zones and safety regulations established by VAFB.

Addressing ozone depleting materials, the applicant does not anticipate releases of fluorocarbons to the atmosphere and that it will comply with all U.S. Air Force regulations that apply to the use of ozone depleting chemicals.

Regarding compliance with the Clean Air Act, the applicant notes that the Act would require compliance with its "Conformity Rule" if emission levels were to exceed "de minimis" levels. Federal actions that do not contribute pollutants above the specified levels are exempt from the conformity analysis requirements. An Air Force Air Emissions Conformity Analysis concluded that proposed construction and operations of the EELV, will not exceed the de minimis thresholds.

Therefore, the Commission finds that the project, as proposed, complies with all applicable APCD, ARB, and Clean Air Act requirements, and is consistent with Section 30253(3) of the Coastal Act.

**E. Water Quality Resources.** Section 30231 of the Coastal Act provides that:

*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.*

The Air Force will collect and test waste water from launch activities (deluge and wash down water) and then truck the water to a treatment facility on South VAFB. An additional water quality concern is the generation of an acid ground cloud caused by the launch events. However, this impact will not be significant because the most of the EELVs use a liquid fuel that does not generate Hydrogen Chloride and Aluminum oxide (the main components of the acid ground cloud). Thus, the ground clouds from the EELV are far less hazardous than the clouds created from launches of rockets using solid fuels. Therefore, the Commission finds that the proposed project is consistent with the water quality protection policies of the CCMP.

**F. Oil Spills.** There is a potential for the launch activities at VAFB to damage offshore oil platforms and cause an oil spill. Section 30232 of the Coastal Act requires protection of coastal resources from oil spills. That section provides:

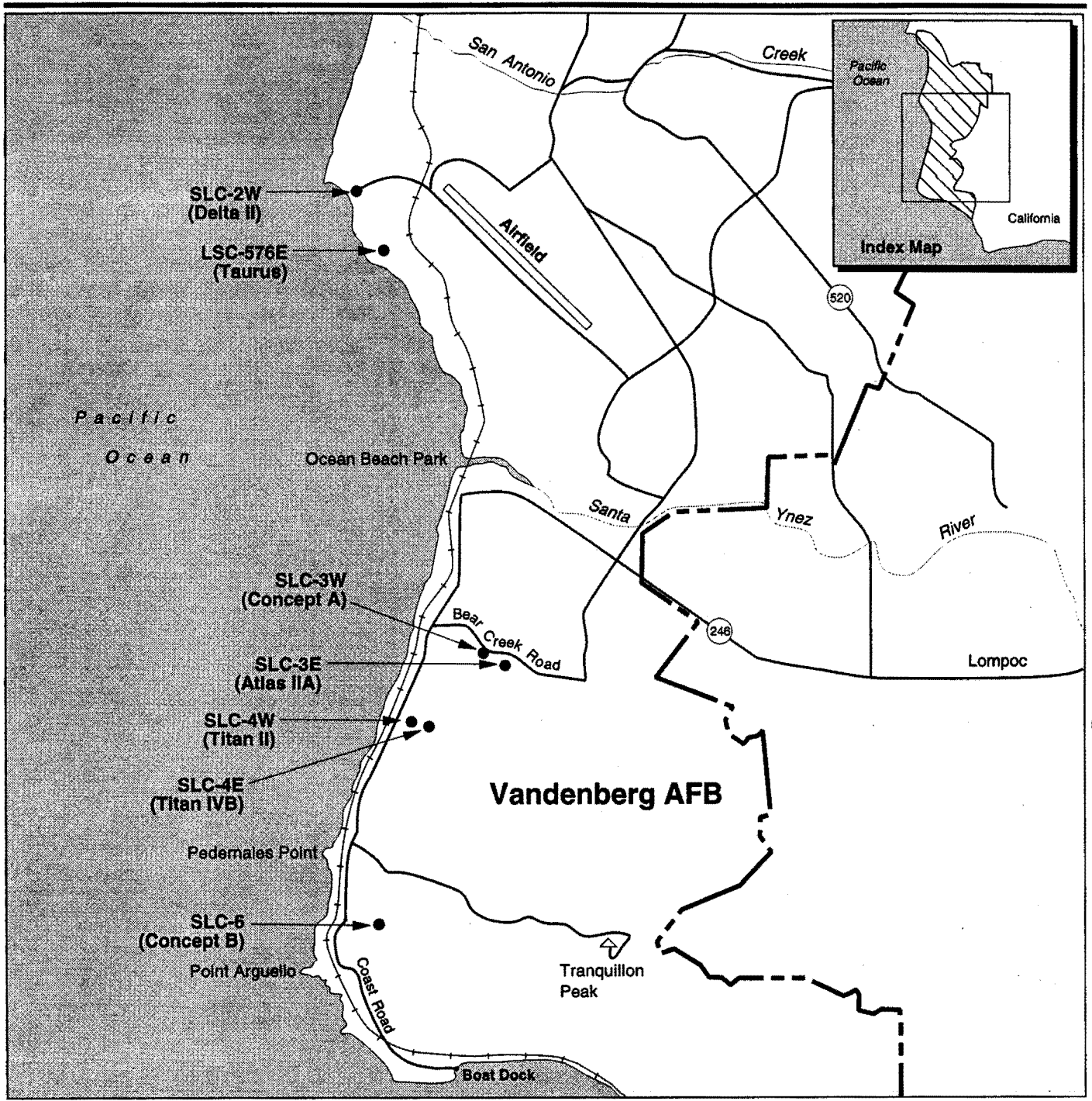
*Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur.*

The Air Force recognizes the potential for an accident during launch damaging an offshore oil platform. This project is subject to the stringent safety requirements as the Air Force implements for any military launch. These safety requirements include measures to protect oil platforms from impacts from catastrophic events. The consistency determination the Air Force's launch facility on Cypress Ridge, SLC-7 (CD-51-89), describes the procedures used to minimize the risk of an oil spill:

*During SLC-7 launches, the USAF will advise oil companies operating offshore of the need to evacuate oil platforms considered to be at risk from*

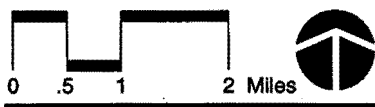
*the launch. According to oil industry representatives, prior to evacuation of a platform, the wellbore will be closed and capped, and the blow-out prevention equipment on the ocean floor and the platform will be activated to prevent a spill. In addition, not all personnel would be evacuated. A skeleton 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 request assistance from shore-based support services.*

The Commission has historically found that these measures will reduce the potential for oil spills caused by an accident during a launch. Therefore, the Commission finds that the proposed project will protect against the potential for an oil spill, and thus that the proposed project is consistent with the oil spill protection policy of the CCMP.



**EXPLANATION**

- Base Boundary
- LSC Launch Support Complex
- SLC Space Launch Complex
- (248) State Route




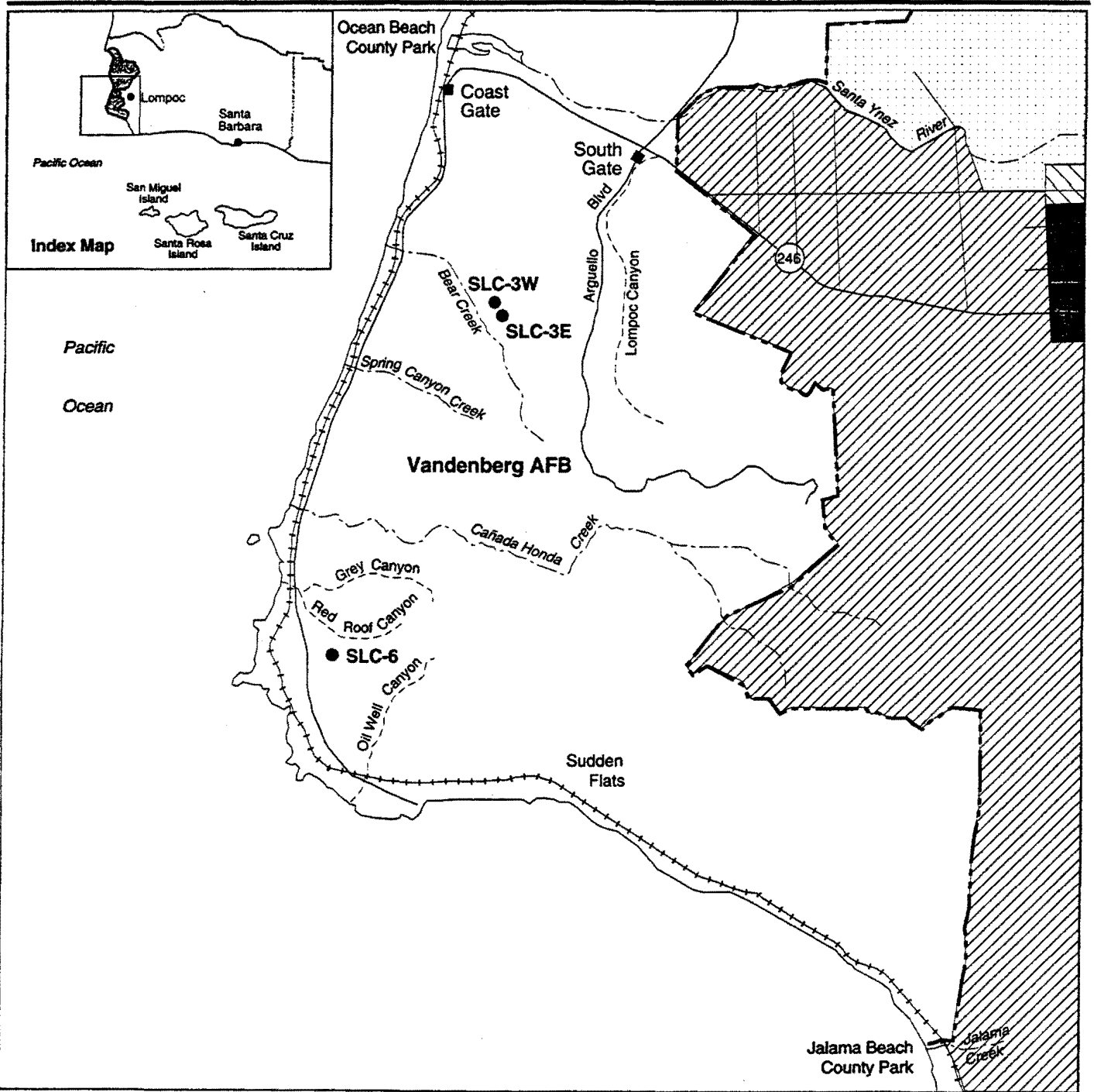
EELV/119

**Space Launch Complexes on Vandenberg AFB, California**

**EXHIBIT NO. 1**

**APPLICATION NO. CD-49-98**

 California Coastal Commission



**Index Map**

Pacific  
Ocean

**EXPLANATION**

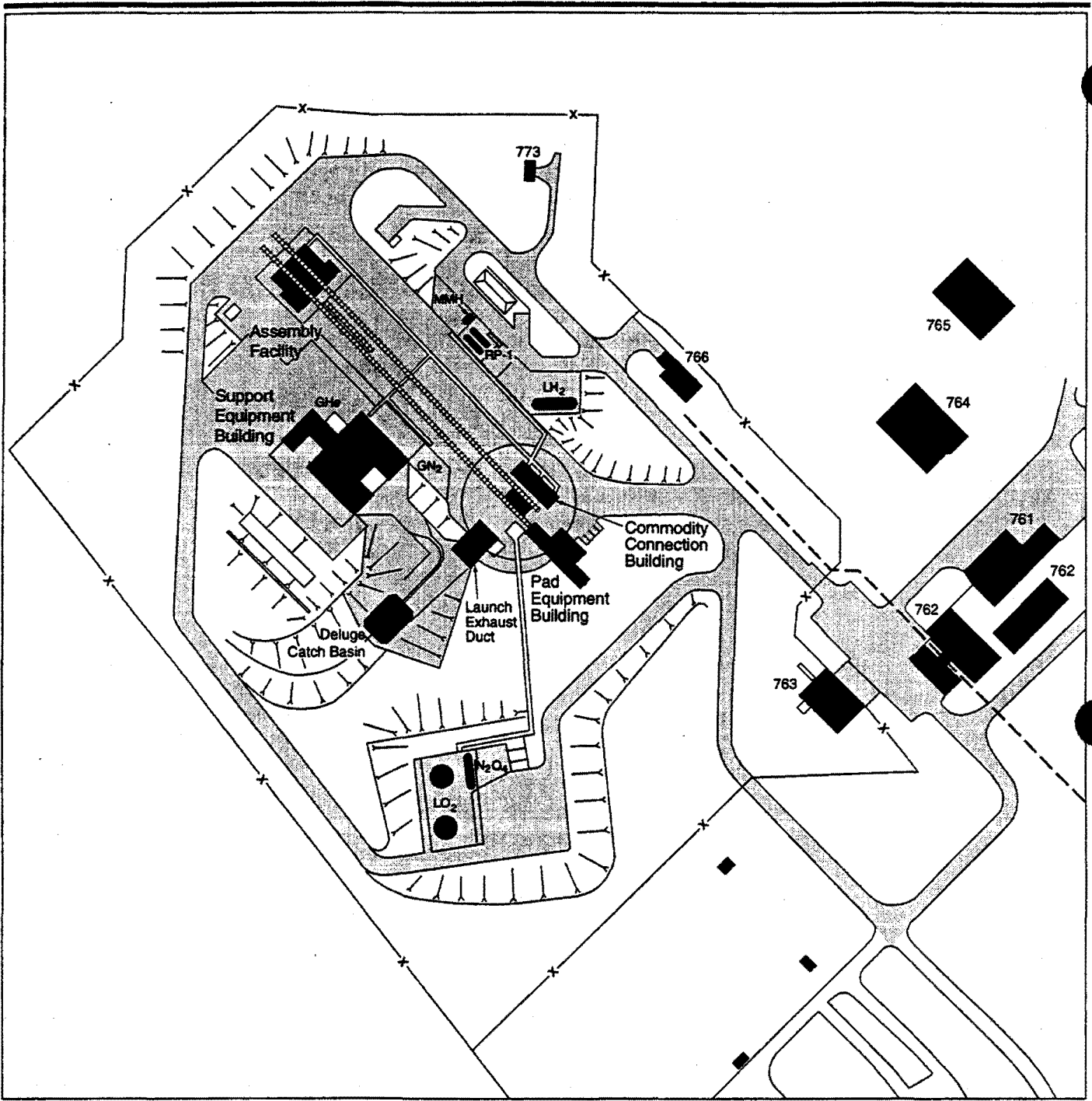
- Industrial
- Commercial
- Residential
- Industrial
- Agriculture
- Vandenberg AFB Boundary

**Off-Base Land Use,  
South Vandenberg  
AFB, California**

**EXHIBIT NO. 2  
APPLICATION NO. CD-49-98**

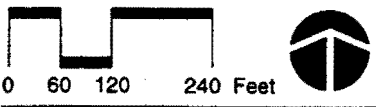


California Coastal Commission



**EXPLANATION**

- |                               |                                     |     |                 |
|-------------------------------|-------------------------------------|-----|-----------------|
| GHe                           | Gaseous Helium                      | --- | Electrical Line |
| GN <sub>2</sub>               | Gaseous Nitrogen                    | —   | Embankment      |
| LH <sub>2</sub>               | Liquid Hydrogen                     | ■   | New Pavement    |
| LO <sub>2</sub>               | Liquid Oxygen                       |     |                 |
| MMH                           | Monomethyl Hydrazine                |     |                 |
| N <sub>2</sub> O <sub>4</sub> | Nitrogen Tetroxide                  |     |                 |
| RP-1                          | Rocket Propellant-1 (Kerosene Fuel) |     |                 |

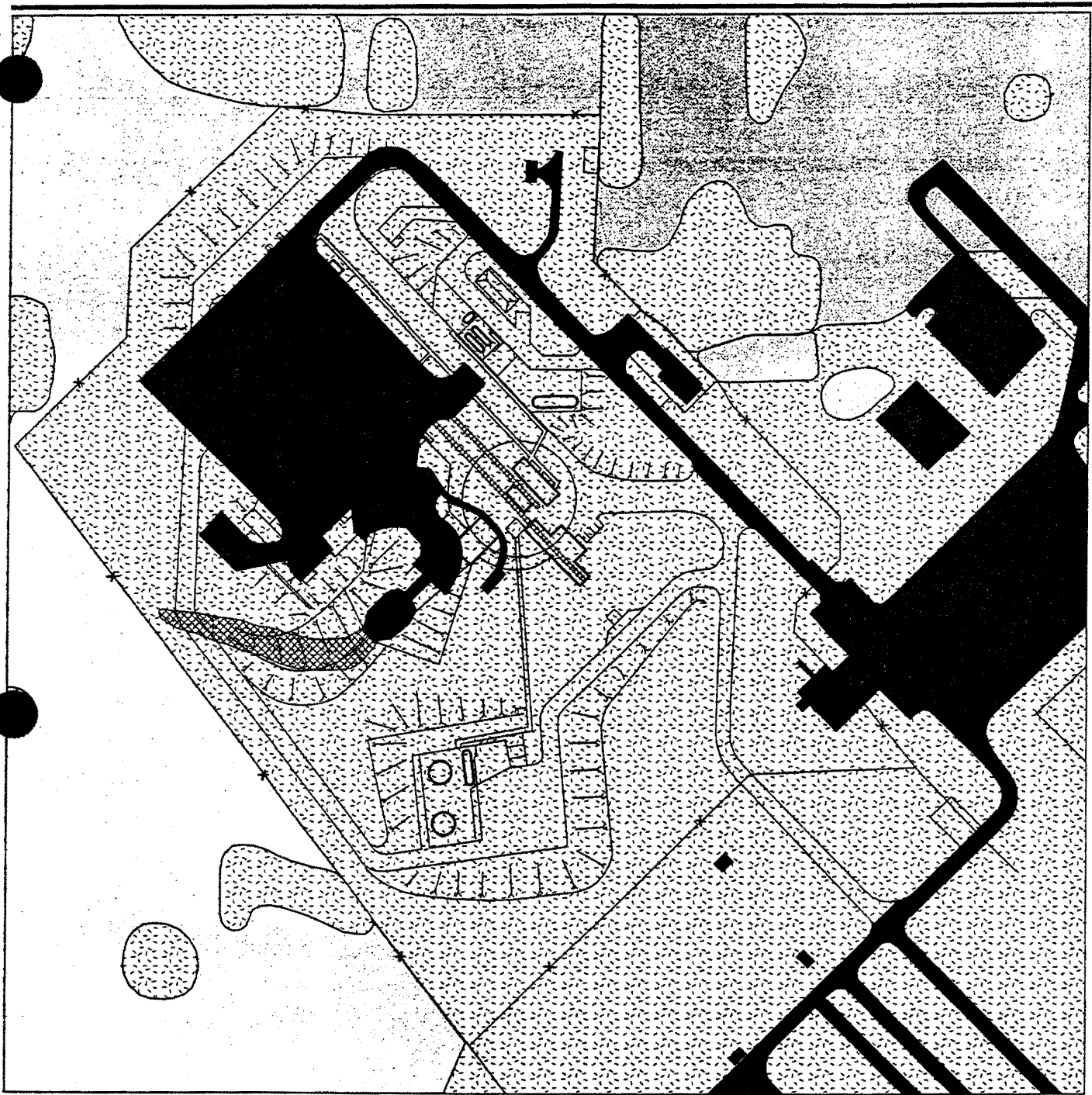


**Concept A  
SLC-3W Site Plan,  
Vandenberg AFB,  
California**







**EXHIBIT NO. 3  
APPLICATION NO. CD-49-98**

California Coastal Commission





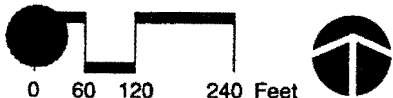
**EXPLANATION**

- |  |   |   |                           |
|--|---|---|---------------------------|
|  | Coastal Sage Scrub                            |  | Grasslands                |
|  | Developed                                     |  | Wetland (Willow Riparian) |
|  | New pavement proposed/<br>Proposed facilities |   |                           |
|  | Electrical line                               |   |                           |


**SLC-3W Vegetation  
and Sensitive Habitat  
Vandenberg AFB,  
California**

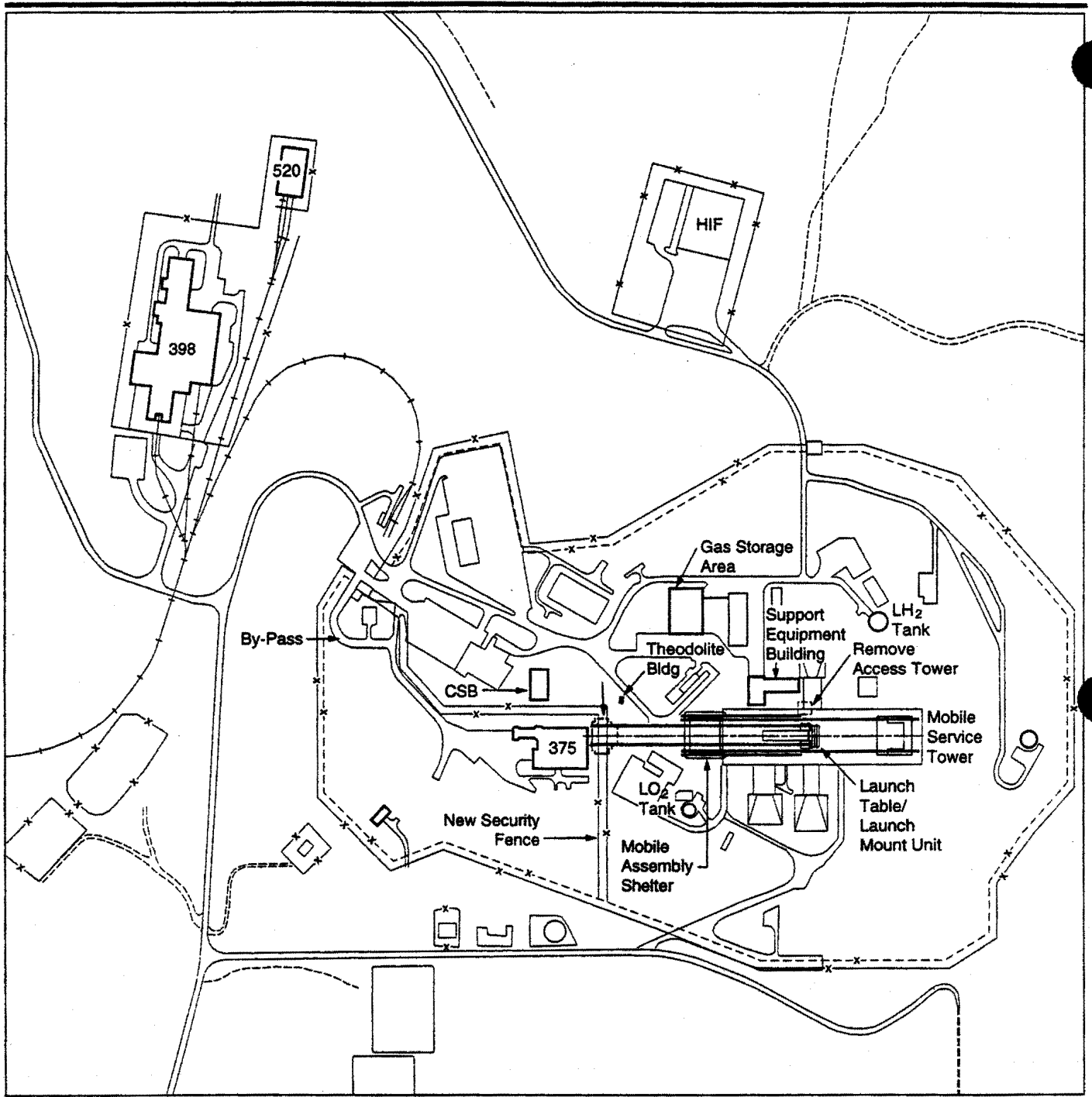
**EXHIBIT NO. 4**

**APPLICATION NO. CD-49-98**



Source: Bionetics Corporation, 1988; site visit, 1997.

 California Coastal Commission



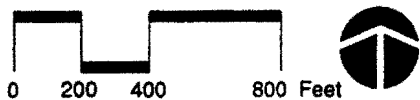
**EXPLANATION**

- CSB Common Support Building
- HIF Horizontal Integration Facility
- LH<sub>2</sub> Liquid Hydrogen
- LO<sub>2</sub> Liquid Oxygen
- x— Security Fence
- - -x- - - Double fence (if required)

**Concept B  
SLC-6 Site Plan,  
Vandenberg AFB,  
California**

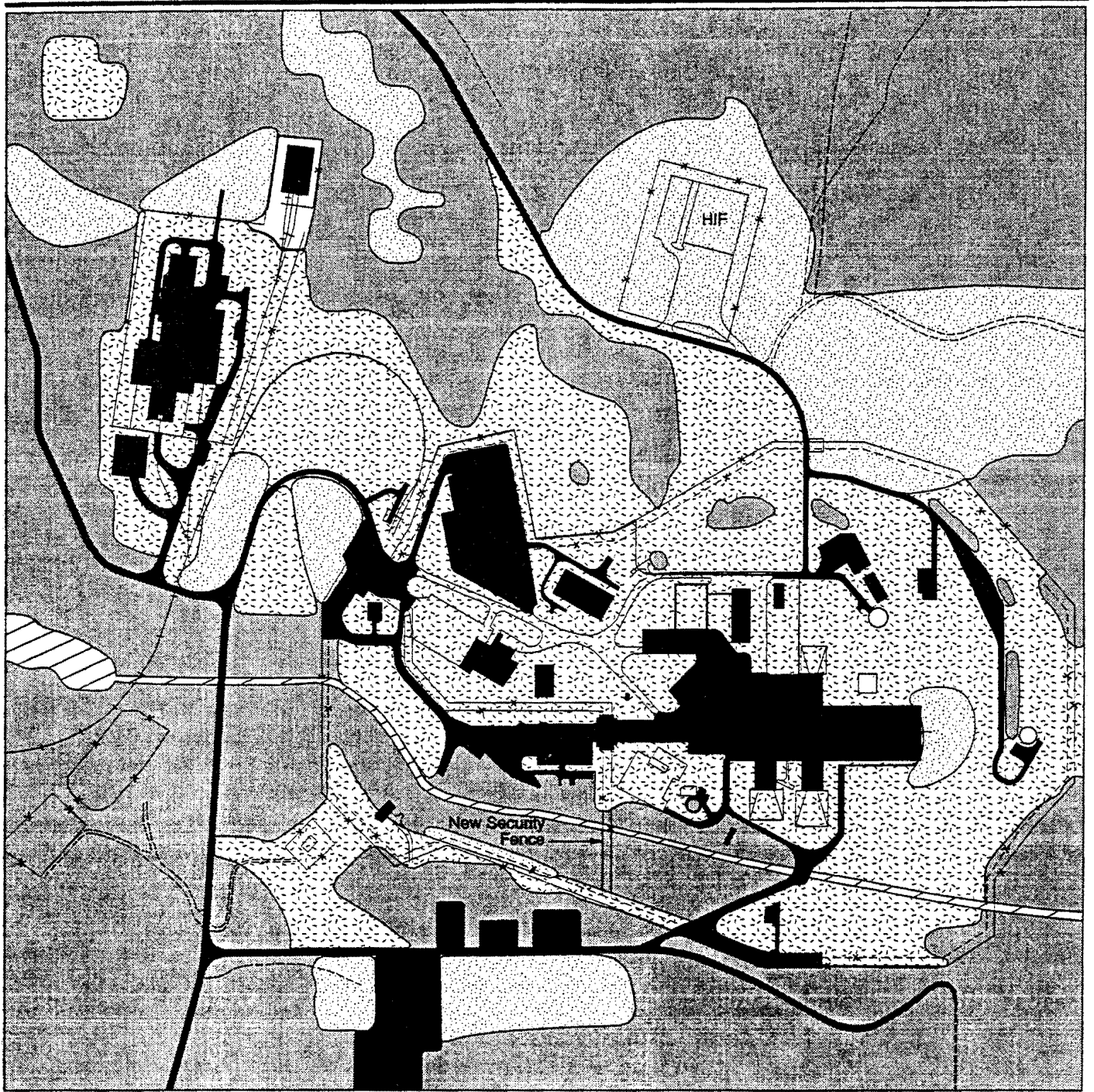
**EXHIBIT NO. 5**

**APPLICATION NO. CD-49-98**



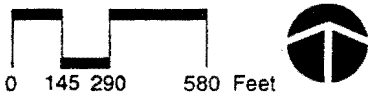
Note: Construction laydown areas would be located immediately adjacent to the SLC-6 launch pad.

California Coastal Commission



**EXPLANATION**

- - - Double Fence (If required)
- - - Security Fence
- HIF Horizontal Integration Facility
- Developed
- Barren
- ▨ Coastal Sage Scrub
- Grassland
- ▨ Wetland
- ▨ New proposed facilities

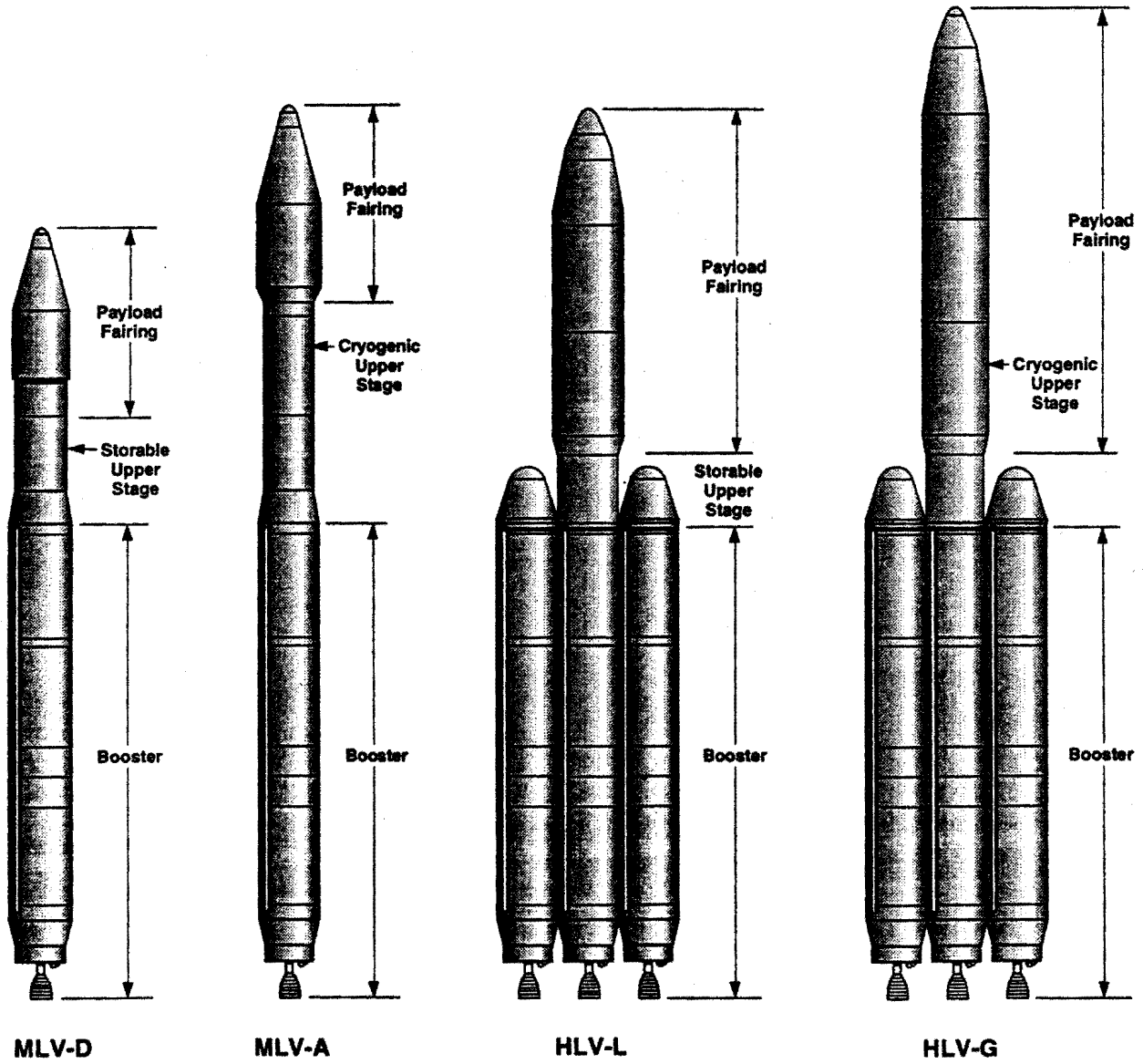


Source: Bionetics Corporation, 1988; site visit, 1997.

**SLC-6 Vegetation and Sensitive Habitat Vandenberg AFB, California**

**EXHIBIT NO. 6**  
**APPLICATION NO. CD-49-98**

California Coastal Commission



**EXPLANATION**

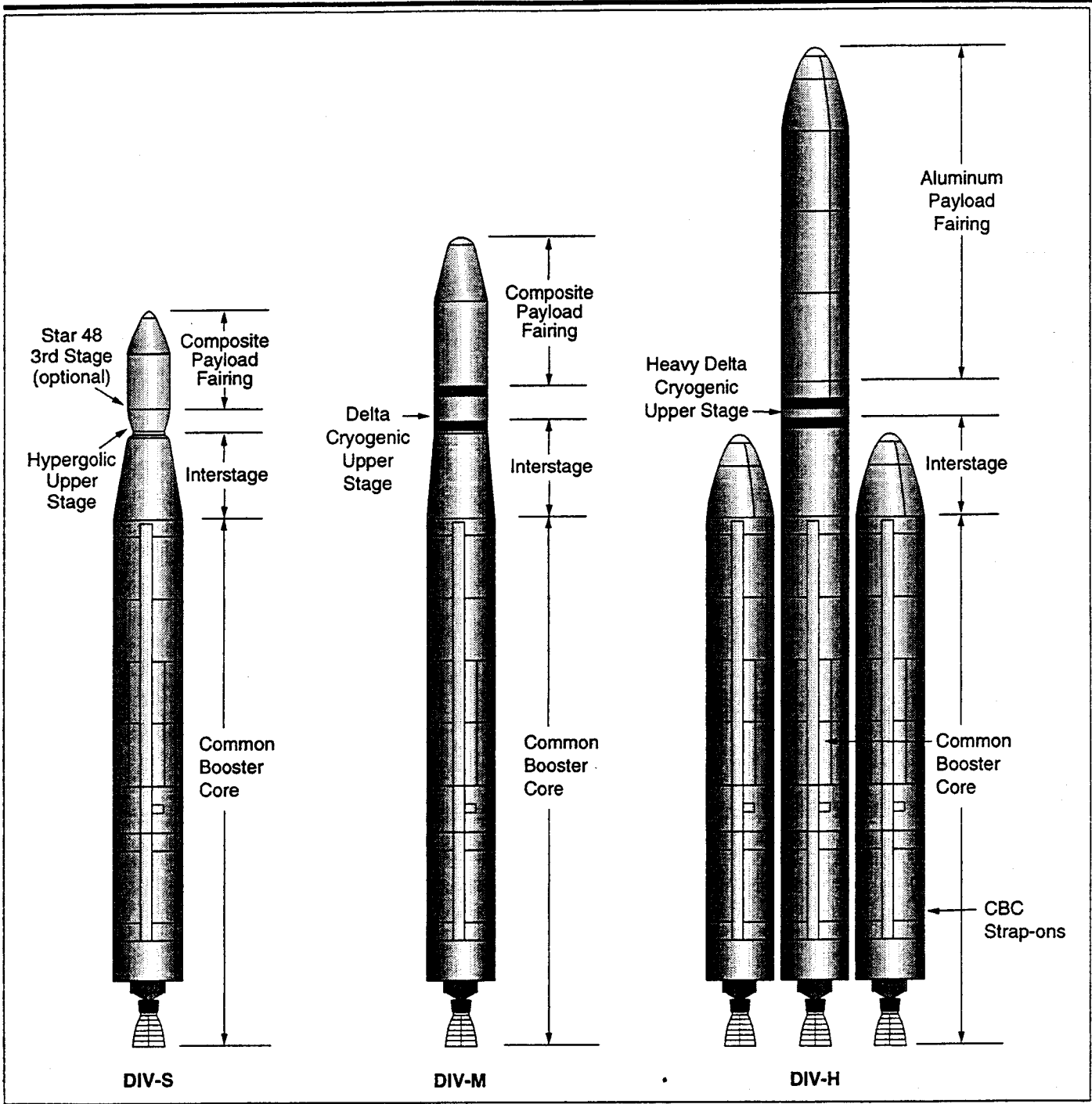
HLV Heavy Lift Variant  
 MLV Medium Lift Variant

**Concept A  
 Launch Vehicle  
 Concept**

**EXHIBIT NO. 7  
 APPLICATION NO. CD-49-98**

NOT TO SCALE

California Coastal Commission




**EXPLANATION**

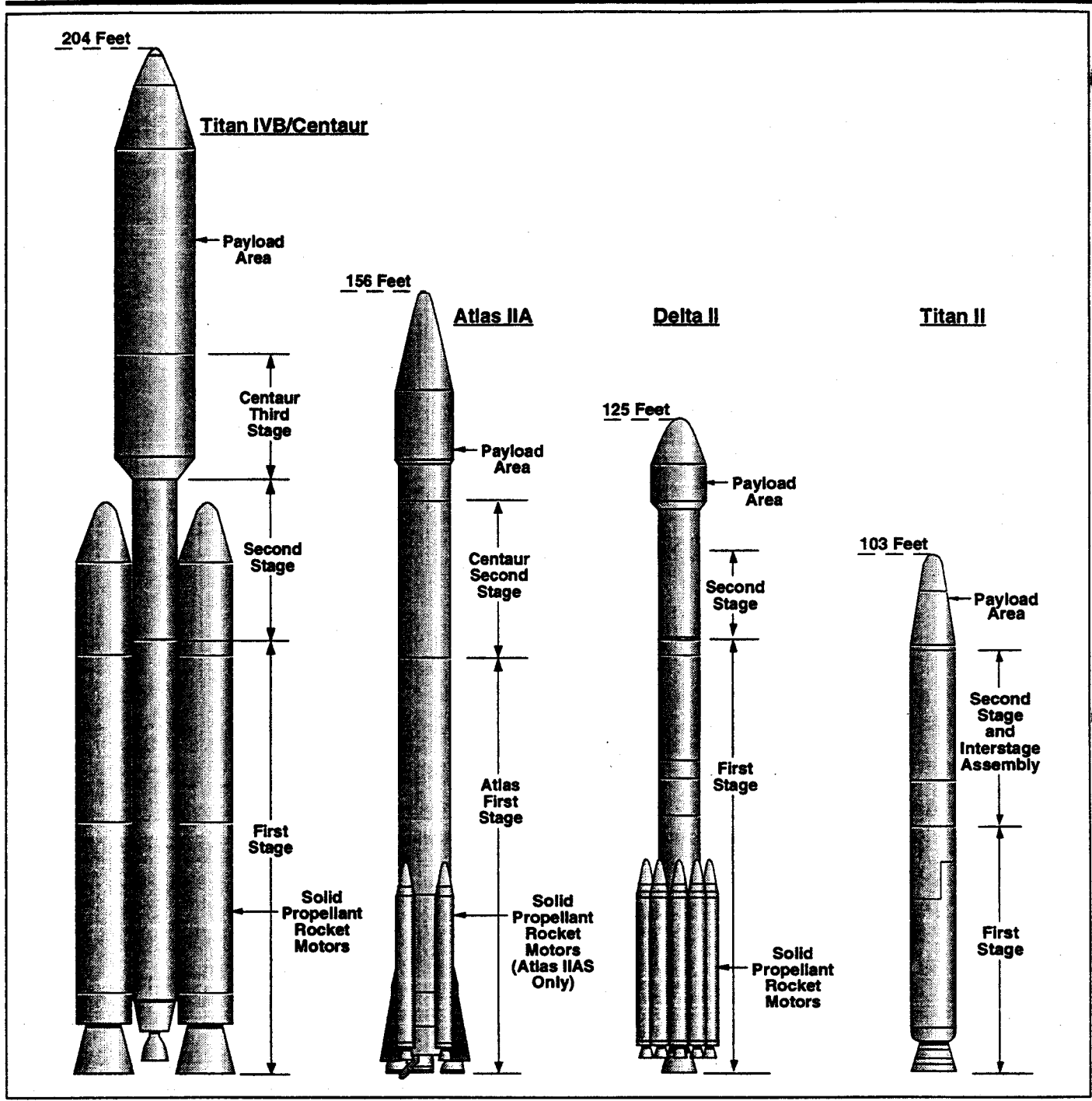
- CBC Common Booster Core
- DIV Delta IV
- DIV-H Heavy Launch Vehicle
- DIV-M Medium Launch Vehicle
- DIV-S Small Launch Vehicle

**Concept B  
Launch Vehicle  
Concept**

**EXHIBIT NO. 8  
APPLICATION NO. CD-49-98**

NOT TO SCALE

 California Coastal Commission

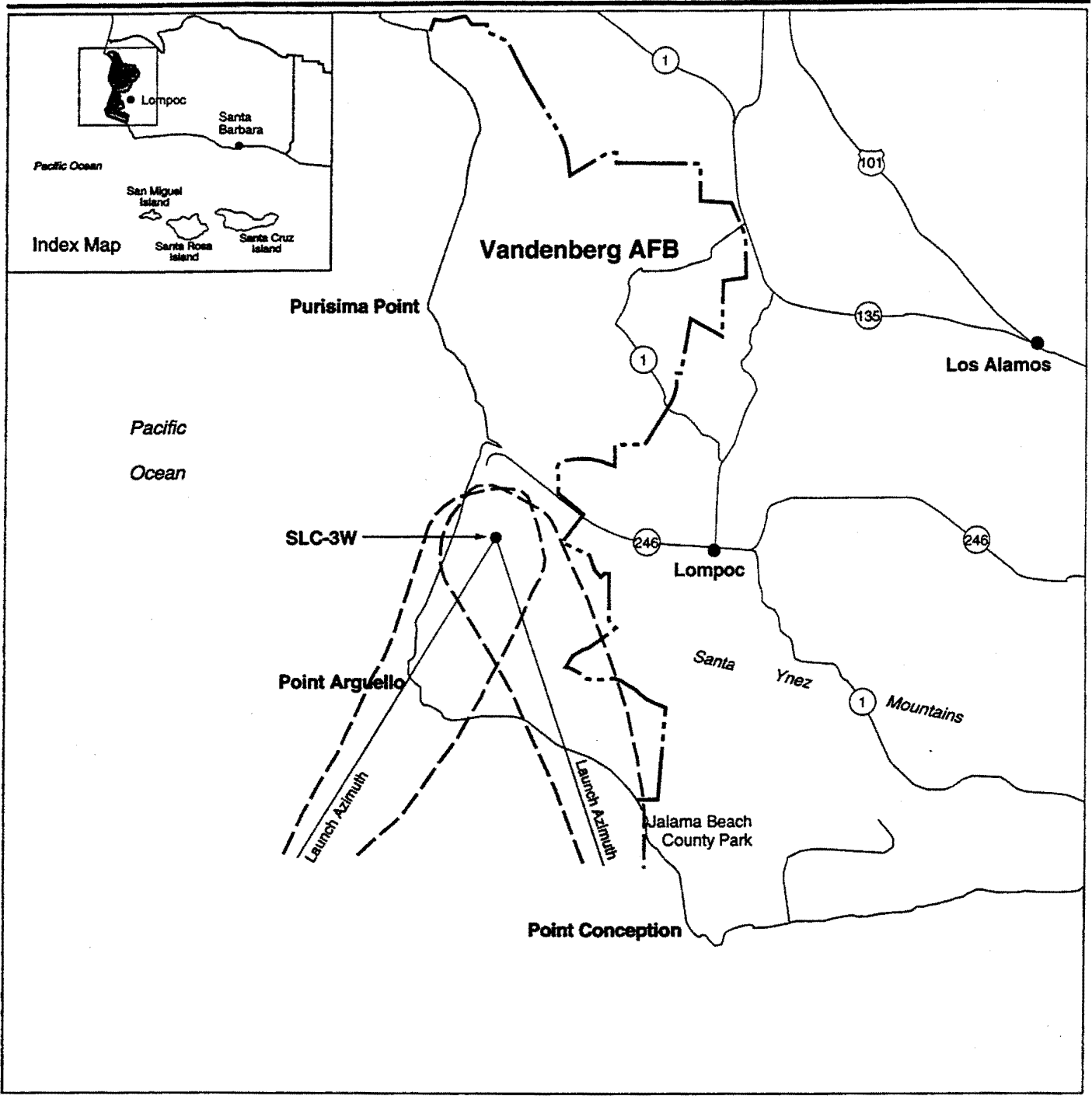


**No-Action Alternative Launch Vehicles**

**EXHIBIT NO. 9  
APPLICATION NO. CD-49-98**

NOT TO SCALE

California Coastal Commission




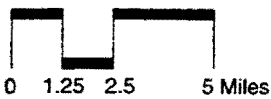
**EXPLANATION**

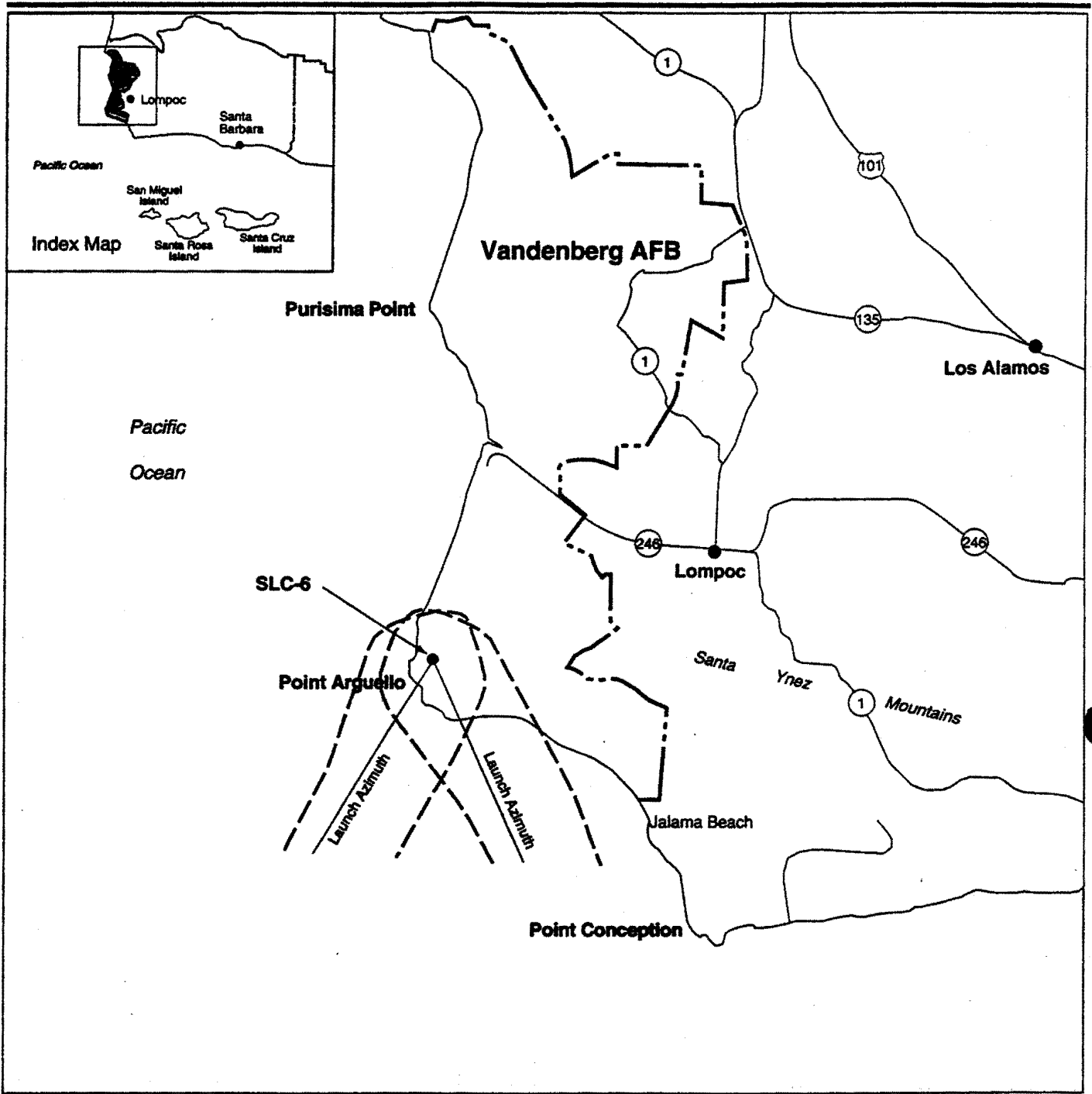
- Vandenberg AFB Boundary
- Impact Debris Corridor

**Typical Impact Debris Corridors, SLC-3W**

EXHIBIT NO. 10  
APPLICATION NO. CD-49-98

 California Coastal Commission



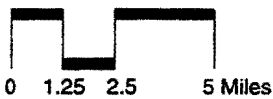


**EXPLANATION**

- Vandenberg AFB Boundary
- Impact Debris Corridor

**Typical Impact Debris Corridors, SLC-6**

**EXHIBIT NO. 11  
APPLICATION NO. CD-49-98**




 California Coastal Commission



Table 2.1-3. Concept A Launch Rates

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
<b>East Coast<sup>(a)</sup></b>																					
<b>Government<sup>(b)</sup></b>																					
MLV-D	1	2	3	2	2	3	3	3	3	3	5	3	5	3	3	3	3	3	3	3	59
MLV-A		2	2	4	7	6	4	4	1	3	3	5	4	5	7	5	3	4	5	4	78
HLV-L																					
HLV-G			1			1		1			1		1		1			1		1	8
<b>Commercial</b>																					
MLV-D	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	120
MLV-A	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	120
HLV-L																					
HLV-G																					
<b>West Coast<sup>(c)</sup></b>																					
<b>Government<sup>(b)</sup></b>																					
MLV-D		1	1		1	1	3	2	1	2		2	1	2		1	1	1		1	21
MLV-A		1	1	3	2	3	3	1	3	2	4	2	2	4	1	2	3	4	1	3	45
HLV-L								1													1
HLV-G																					
<b>Commercial</b>																					
MLV-D	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	80
MLV-A																					
HLV-L																					
HLV-G																					
<b>Total</b>	<b>17</b>	<b>22</b>	<b>24</b>	<b>25</b>	<b>28</b>	<b>30</b>	<b>29</b>	<b>28</b>	<b>24</b>	<b>26</b>	<b>29</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>28</b>	<b>27</b>	<b>26</b>	<b>29</b>	<b>25</b>	<b>28</b>	<b>532</b>

Notes: (a) Cape Canaveral Air Station, Florida.  
 (b) Based on the National Executable Mission Model.  
 (c) Vandenberg Air Force Base, California.  
 HLV = heavy lift variant  
 MLV = medium lift variant

EELV DEIS

EXHIBIT NO. 12

APPLICATION NO. CD-49-98

Table 2.1-8. Concept B Launch Rates

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total	
<b>East Coast<sup>(a)</sup></b>																						
<b>Government<sup>(b)</sup></b>																						
DIV-S	1	2	3	2	2	3	3	3	3	3	5	3	5	3	3	3	3	3	3	3	3	59
DIV-M		2	2	4	7	6	4	4	1	3	3	5	4	5	7	5	3	4	5	4	4	78
DIV-H			1			1		1			1		1		1			1		1		8
<b>Commercial</b>																						
DIV-S	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	118
DIV-M																						
DIV-M+	8	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	122
DIV-H																						
<b>West Coast<sup>(c)</sup></b>																						
<b>Government<sup>(b)</sup></b>																						
DIV-S		1	1		1	1	3	2	1	2		2	1	2		1	1	1		1		21
DIV-M		1	1	3	2	3	3	1	3	2	4	2	2	4	1	2	3	4	1	3		45
DIV-H								1														1
<b>Commercial</b>																						
DIV-S		4																				4
DIV-M																						
DIV-M+	2			4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	38
DIV-H	2		4		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	38
<b>Total</b>	<b>17</b>	<b>22</b>	<b>24</b>	<b>25</b>	<b>28</b>	<b>30</b>	<b>29</b>	<b>28</b>	<b>24</b>	<b>26</b>	<b>29</b>	<b>28</b>	<b>29</b>	<b>30</b>	<b>28</b>	<b>27</b>	<b>26</b>	<b>29</b>	<b>25</b>	<b>28</b>	<b>532</b>	

Notes: The DIV-S and DIV-M vehicles fulfill the medium lift requirement of the National Mission Model. The DIV-H vehicle fulfills the heavy lift requirement of the National Mission Model.

(a) Cape Canaveral Air Station, Florida.

(b) Based on the National Executable Mission Model.

(c) Vandenberg Air Force Base, California.

DIV-H = heavy launch vehicle

DIV-M = medium launch vehicle

DIV-M+ = medium launch vehicle with solid rocket motor strap-ons

DIV-S = small launch vehicle

EXHIBIT NO. 13

APPLICATION NO. CD-49-98

California Coastal Commission

EELV DEIS



DEPARTMENT OF THE AIR FORCE

30TH SPACE WING (AFSPC)

23 Apr 98

MEMORANDUM FOR MR. JAMES R. RAIVES  
CALIFORNIA COASTAL COMMISSION  
45 FREMONT STREET, SUITE 1900  
SAN FRANCISCO CA 94105-2219

FROM: 30 CES/CEVPP

SUBJECT: Additional Information Regarding EELV Coastal Consistency Determination

1. We appreciate your assistance in helping us move forward with a Consistency Determination for the Evolved Expendable Launch Vehicle (EELV) program. It is important for the EELV program to be addressed at the May 1998 California Coastal Commission (CCC) meeting because the Air Force plans to issue its Record of Decision in June 1998 in order to meet mission requirements.

2. We are providing responses to the issues raised during our recent meeting. These issues, including impacts to beach access, filling of wetlands, harbor dredging, and monitoring and mitigation of impacts to threatened and endangered species are addressed in the following paragraphs.

a. **Beach Access.** EELV will minimize interference with beach access to the maximum extent practicable. While mission requirements and orbital dynamics preclude any guarantee that beach closures will not occur, EELV launch scheduling and planning will include consideration of coastal recreational impacts. Specific considerations will include avoiding launches on weekends, especially holiday weekends, and minimizing the number of launches during the peak recreation season. In addition, per your request, Vandenberg AFB will provide an annual report on beach closures.

1) The total expected launch rates for both government and commercial EELVs are included in Table 2.1-11 in the Draft EELV EIS. As referenced in the Coastal Zone Consistency Determination (Section 4.1.2), not all EELV launches will result in beach closures. EELV systems will be phased in to eventually replace completely the current government use of Atlas II, Delta II, and Titan IVB launch systems. It is expected that the more economical EELV will also be the launch system of choice for commercial launch activity in lieu of current launch systems. If the total number of launches exceeds the level stated in the EIS and that increase results in impacts to coastal resources, the Air Force will consult with the CCC.

EXHIBIT NO. 14

GUARDIANS OF THE HIGH FRONTIER

APPLICATION NO. CD-49-98

2) We believe the information above addresses your concerns regarding beach access. However, we agree to submit a phased consistency determination for consideration of the three remaining issues: SLC-3W wetlands, dredging, and endangered species. While unusual, this is an appropriate procedural mechanism given the continuing nature of the launch program and the similarity of impacts as compared to those of current launch vehicles. We recognize that through this phased consistency approach the Commission retains its full regulatory authority over EELV.

b. **Wetlands.** We request the CCC not consider SLC-3W wetlands at this time, pending re-evaluation of the need for the road impacting the wetland, and/or the feasibility of other alternatives, and/or the potential for mitigation if warranted.

c. **Dredging.** A phased approach is also requested for the proposed dredging operation pending completion of sediment analysis, and identification and characterization of the disposal site. These activities are now underway in preparation for the U. S. Army Corps of Engineers permitting process.

d. **Endangered Species.** EELV will utilize sites that have been previously used for substantially similar launch activities. There have been previous consultations regarding these sites. The Air Force will submit the second phase of the consistency determination upon completion of the Section 7 consultation now in progress with the U.S. Fish and Wildlife Service (USFWS). It is anticipated that the consultation will result in a no-jeopardy opinion which may include monitoring programs similar to those being conducted for current launch vehicles. Copies of monitoring reports will be provided as required in the biological opinion. Finally, should monitoring indicate impacts to species beyond those anticipated, potential mitigation activities will be coordinated with the CCC as well as the USFWS.

2. We believe the above information addresses the concerns raised at the meeting on April 22<sup>nd</sup> and look forward to seeing you at the CCC meeting on May 12, 1998. Please do not hesitate to contact me at (805) 734-8232, ext 50633 or Dale Clark at (210) 536-3668 if you have any further questions regarding this issue.

  
JAMES L. JOHNSTON, GS-13  
Environmental Planner

Table 3.14-2. Threatened, Endangered, and Candidate Species Occurring or Potentially Occurring at Vandenberg AFB, California

Common Name	Scientific Name	Federal Status	State Status
<b>Plants</b>			
Beach layia	<i>Layia carnosa</i>	E	E
Gambel's watercress	<i>Rorippa gambelli</i>	E	T
Seaside's bird's beak	<i>Cordylanthus rigidus</i> ssp. <i>littoralis</i>	-	E
Lompoc yerba santa	<i>Eriodictyon capitatum</i>	C	R
Beach spectaclepod	<i>Dithyrea maritima</i>	-	T
La Graciosa thistle	<i>Cirsium loncholepis</i>	C	T
Surf thistle	<i>Cirsium rhotophilum</i>	C	T
<b>Fish</b>			
Unarmored threespine stickleback	<i>Gasterosteus aculeatus williamsonii</i>	E	E
Tidewater goby	<i>Eucyclogobius newberryi</i>	E	-
Steelhead trout	<i>Oncorhynchus mykiss irideus</i>	E	-
<b>Reptiles and Amphibians</b>			
California red-legged frog	<i>Rana aurora draytonii</i>	T	SC
Green sea turtle	<i>Chelonia mydas</i>	T	-
Loggerhead sea turtle	<i>Caretta caretta</i>	T	-
Pacific Ridley sea turtle	<i>Lepidochelys olivacea</i>	T	-
Leatherback sea turtle	<i>Dermodochelys coriacea</i>	E	-
<b>Birds</b>			
California brown pelican	<i>Pelicanus occidentalis californicus</i>	E	E
Bald eagle	<i>Haliaeetus leucocephalus</i>	T	E
American peregrine falcon	<i>Falco peregrinus anatum</i>	E	E
California black rail	<i>Laterallus jamaicensis coturniculus</i>	-	T
Western snowy plover	<i>Charadrius alexandrinus nivosus</i>	T	SC
California least tern	<i>Sterna antillarum browni</i>	E	E
Western yellow-billed cuckoo	<i>Coccyzus americanus occidentalis</i>	-	E
Southwestern willow flycatcher	<i>Empidonax traillii extimus</i>	E	E
Least Bell's vireo	<i>Vireo bellii pusillus</i>	E	E
Belding's savannah sparrow <sup>(a)</sup>	<i>Passerculus sandwichensis beldingi</i>	-	E
Mountain plover	<i>Charadrius montanus</i>	C	-
<b>Mammals</b>			
Guadalupe fur seal	<i>Arctocephalus townsendi</i>	T	T
Steller sea lion	<i>Eumetopias jubatus</i>	T	-
Southern sea otter	<i>Enhydra lutris nereis</i>	T	-
Sei whale	<i>Balaenoptera borealis</i>	E	-
Blue whale	<i>Balaenoptera musculus</i>	E	-
Finback whale	<i>Balaenoptera physalus</i>	E	-
Humpback whale	<i>Megaptera novaeangliae</i>	E	-
Right whale	<i>Balaena glacialis</i>	E	-
Sperm whale	<i>Physeter catodon</i>	E	-

Note: (a) Taxonomic status of subspecies is pending.

C = candidate (former Category C1)  
 E = endangered  
 R = rare (state designation)  
 SC = special concern (state designation)  
 T = threatened

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