STATE OF CALIFORNIA – THE RESOURCES AGENCY PETE WILSON, *Governor*

CALIFORNIA COASTAL COMMISSION
45 FREMONT STREET, SUITE 2000
SAN FRANCISCO, CA 94105-2219
VOICE AND TDD (415) 904-5200

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STAFF REPORT AND RECOMMENDATION

ON CONSISTENCY CERTIFICATION

Consistency Certification No.	**CC-28-96**
Staff:	JRR-SF
File Date:	3/4/96
3 Months:	6/4/96
6 Months:	9/4/96
Commission Meeting:	4/9/96

APPLICANT: **ORBITAL SCIENCES CORPORATION**

DEVELOPMENT LOCATION: Launch Support Complex 576E, Space Launch Complex 3 West, and the California Commercial Spaceport, Vandenberg Air Force Base, Santa Barbara County. (Exhibit 1)

DEVELOPMENT DESCRIPTION: Up to three Launches per year of the Taurus Commercial Space Vehicles up three times per year.

SUBSTANTIVE FILE DOCUMENTS:

1. Environmental Assessment for the Taurus Standard Small Launch Vehicle Program, Vandenberg Air Force Base, April 1992.

2. ND-49-92, Negative determination for U.S. Air Force, Taurus Standard Small Launch Vehicle Program, Vandenberg Air Force Base.

3. CD-51-89, Consistency determination for construction and operation of SLC-7.

4. CD-88-93, Consistency determination for launching Lockheed Launch Vehicles.

5. CC-42-94, Consistency certification for construction and operation of California Commercial Spaceport.

6. Fish and Wildlife Service, Biological Opinion for Missile Launches from Two Sites on Vandenberg Air Force Base, Santa Barbara County, California, April 12, 1993 (1-8-93-F-8).

7. Fish and Wildlife Service, Final Report -- Western Snowy Plover Monitoring in 1993 At Vandenberg Air Force Base, California, February 2, 1994.

EXECUTIVE SUMMARY:

The proposed project utilizes commercial Taurus solid-fueled rocket launch system to send satellites into low earth orbits. Orbital Science Corporation (OSC) proposes to launch the Taurus from three locations on Vandenberg Air Force Base (VAFB), with a maximum of three launches per year. The three locations include Launch Support Complex 576E (LSC 576E) within North VAFB, Space Launch Complex 3 West (SLC-3W), and the California Commercial Spaceport (Spaceport) within South VAFB.

The proposed project will affect recreational resources of the coastal zone, because it requires closure of nearby Ocean Beach County Park and adjacent beaches. Despite this impact, the project is consistent with the recreation policies of the California Coastal Management Program (CCMP). The beach closures are necessary to protect public safety. The applicant will minimize the recreational impact by limiting the number of launches to three times per year, by limiting the beach closure to six hours per launch attempt, and by avoiding launches on popular three-day weekends. Additionally, the impact is not significant because OSC will not exceed the historic number of launches of this vehicle.

The project is in an area that contains sensitive habitat resources. The project will not significantly affect these resources and is consistent with the Habitat Policies of the CCMP. The sensitive resources are far enough away from the launch facility to significantly reduce potential impacts and the applicant will monitor sensitive habitat areas to verify its conclusions that this impact will be minimal.

The project will not significantly affect air and water quality resources of the coastal zone, and thus is consistent with those policies of the CCMP. Finally, the project includes measures to minimize oil spills.

STAFF SUMMARY AND RECOMMENDATION:

I. Project Description:

The proposed project utilizes commercial Taurus solid-fueled rocket launch system to send satellites into low earth orbits. OSC proposes to launch the Taurus from three locations on VAFB, with a maximum of three launches per year. The three locations include LSC 576E within North VAFB and SLC-3W and the Spaceport within South VAFB (Exhibit 1).

OSC designed the Taurus launch vehicle to utilize a flat, undeveloped pad with no permanent support facilities. Accordingly, OSC brings all the required equipment and leaves the launch site exactly as it was before the start of the launch preparation. The Taurus Launch Vehicle consists of four solid propellant fueled rocket motors. The initial Taurus rocket motor is a Thiokol CASTOR 120™. The

CASTOR 120™ contains 108,000 pounds of solid ammonium perchlorate-aluminum powder in hydroxyl terminated polybutadiene binder. The CASTOR 120™ burns approximately 80 seconds at a rate of 1,367 pounds per second of fuel and reaches an altitude of 130,000 feet. The Taurus launch vehicle upper stages are from the OSC's Pegasus air-launched vehicle. These stages all ignite above 130,000 feet and deliver the payload to orbits ranging between 120 to 500 miles above the earth.

II. Applicant's Consistency Certification:

Orbital Science Corporation certifies that the proposed project is consistent with the California Coastal Management Program.

III. Staff Recommendation:

The staff recommends that the Commission adopt the following resolution:

A. Concurrence.

The Commission hereby **concurs** with the consistency certification made by Orbital Service Corporation for the proposed project, finding that the project is consistent with the California Coastal Management Program.

IV. Findings and Declarations:

The Commission finds and declares as follows:

A. Background. On July 3, 1992, the Commission staff agreed with a negative determination submitted by the Air Force for its launching of Taurus Launch Vehicles from LSC 576E. Although there was only one launch planned at the time, the negative determination allowed for up to three launches per year. The proposed project does not increase the number of launches from this facility; rather it allows for commercial launches instead of military operations and it allows for launching from three locations rather than just from LSC 576E.

B. Access and Recreational Resources. 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 30211 of the Coastal Act provides that:

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.

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.

Two of the launch sites proposed by the applicant are in South VAFB, which is just north of Jalama Beach County Park. The third launch site is within North VAFB and just North of Ocean Beach County Park. These beaches are two of only four public beaches located northern Santa Barbara County. Those public beaches are Gaviota State Park, Jalama County Park, Ocean Beach County Park, and Point Sal State Beach. Because of the limited amount of recreational opportunities in this part of the Coast, all of these beaches are important recreational resources.

The Commission has concerns about any potential impact on the recreational resources. In some cases VAFB requires closures of these public beaches during launches. Almost all launches with southern trajectories from North VAFB require closure of Ocean Beach County Park and associated beaches. Additionally, some of the larger rockets, such as the Titan IV, and any launches with southeastern trajectories may require closure of Jalama Beach (Exhibits 2, 3, and 4). Because of the size of the Taurus vehicles and their trajectory, launches from both sites on South VAFB **will not** result in any public beach closures. The applicant bases its conclusion on the information provided in Exhibit 5. In that Exhibit, the applicant states that it will launch vehicles due south on an azimuth of 180 degrees. Since the shoreline south of the project site turns southeast, Jalama Beach is outside of the hazard zone. Thus southerly launches can occur without requiring the closure of Jalama Beach. The applicant states that launches with an azimuth as low as 168 degrees will not close Jalama Beach.

However, launches from LSC 576E will require closure of Ocean Beach. The Air Force believes that this closure is necessary for public safety reasons. Vehicles launched from LSC 576E will fly over that beach. Ocean Beach will be within the destruct zone for those launches. If the Air Force has to destroy a launch vehicle after launch, debris from the explosion is likely to land on Ocean Beach. Thus the project presents a legitimate safety hazard to people using Ocean Beach. The applicant describes the safety hazard as follows:

The Air Force has determined that both the Ocean Beach County Park and the North VAFB beach areas will be within the potential hazard destruct/debris zone for all Taurus launches completed from LSC 576E. Accordingly, the Ocean Beach County Park and North VAFB beach areas will be closed approximately

> *six hours for nominal Taurus launch countdowns (starting approximately two hours prior to launch and continuing through a 3 to 4 hour window). The impact of the projected closure of these beaches and to the public's access to these recreational sites is minimized given the maximum projected launch rate to 2 to 3 launches per year.*

Therefore, the Commission finds that, if it is necessary to use this site, beach closures are necessary to protect public safety.

Because of the limited amount of public beach available in this part of the coast, the Commission has strong concerns about any activity that affects recreational use of the existing beaches. In order for the Commission to find these beach closures consistent with the requirements of Section 30210 of the Coastal Act, the project must maximize recreation opportunities in a manner consistent with public safety concerns. As described above, the Commission agrees that launches from LSC 576E present a hazard to people using Ocean Beach.

However, before the Commission can find this activity consistent with the recreational policies of the CCMP, the applicant must demonstrate that there are no feasible ways to avoid or reduce the recreation impact. The applicant requires a launch site on VAFB because it is the only location in the United States capable of launching satellites into a polar orbit. As described above, the applicant requests Commission approval to launch from three different launch sites on VAFB: LSC 576E, SLC-3W, and the Spaceport. Also as described above, the two launch sites from South VAFB, SLC-3W and the Spaceport, will not affect recreational resources of the coastal zone. Additionally, it appears that the South VAFB launch sites are advantageous to the applicant. In order to avoid impacts to VAFB facilities, the Air Force requires launches from North VAFB to fly in a westerly direction until it clears the base and then turn to the south. This "dog-leg" maneuver requires additional fuels and reduces the maximum payload weight. There are no directional restrictions on launches from South VAFB.

Despite both the recreational advantages to the public and the economic advantages to the applicant from a South VAFB launch, the applicant must launch from LSC 576E on North VAFB because facilities on South VAFB are not currently capable of launching the Taurus vehicles. Construction of the Spaceport has not been completed. The Air Force expects construction of that facility by mid-1997 and launches from the spaceport by the end of 1997. Additionally, SLC-3W needs modifications before OSC could use that facility. Neither the applicant nor the Air Force has plans to modify that facility in the near future. Although OSC requests Commission authorization for South VAFB launches, those facilities are not currently feasible. The Commission expects that once the Spaceport is operational or the applicant modifies SLC-3W, OSC will launch from South VAFB to avoid recreational impacts and improve their efficiency.

Although the Commission agrees that LSC 576E is currently the only feasible launch location, the Commission must also determine that the applicant has minimized the recreation impact. The applicant proposes a maximum of three launches per year. Each launch event requires a maximum of six hours of beach closure, which includes two hours before the launch and the three- to four-hour launch window. VAFB will reopen the beaches immediately after a successful launch. If the launch occurs on schedule, the beach closure could be as short as two hours. If the launch does not occur within the necessary launch

window, OSC will postpone the launch to the next available window and the Air Force will reopen the beaches. As additional mitigation, the applicant has agreed to avoid scheduling launches on popular three-day weekends during the summer. Therefore, the Commission finds that the applicant will minimize the recreation impact.

Cumulatively, the proposed project will not increase the annual number of beach closures. As described in the background section above, the proposed activity will not increase the number of launches of Taurus launch vehicles from VAFB. Currently, the Air Force and the Commission have authorized applicant to launch a maximum of three governmental launches (Air Force or NASA) from LSC 576E. This consistency certification does not change the number of launches; rather it allows the applicant to expand the type of payload to include those for commercial purposes. Since the consistency certification also authorizes launches from South VAFB, the applicant may reduce the access impact. Although not currently feasible, launches of Taurus vehicles from South VAFB will not require beach closures. When the applicant modifies SLC-3W to launch the Taurus or when the Spaceport is operational, the applicant may launch from those locations, and thus reduce the access impact.

In conclusion, the Commission finds that the beach closures are necessary for public safety, currently there are no feasible alternatives, the applicant has incorporated measures to reduce impacts to recreational resources, and the project will not have new cumulative impacts on coastal recreation. Therefore, the Commission finds that the proposed launch facility is consistent with the access and recreational policies of the CCMP.

C. Habitat Resources. 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 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.*

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

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. Existing Resources. There are several federally listed endangered and threatened species and other species of special significance located on VAFB, including the California least tern, unarmored three-spined stickleback, snowy plover, tidewater goby, Southern sea otter, California Brown Pelican, bald eagle, Southwestern willow flycatcher, and American peregrine falcon. In addition, there are several species of pinnipeds that reside on VAFB. Those pinnipeds include the harbor seal, California sea lion, northern fur seal, and elephant seal. Habitats for the tidewater goby, the unarmored threespined stickleback, the Southwestern willow flycatcher, bald eagle, northern fur seal, and elephant seals are not in the vicinity of the proposed launch site.

The species most likely affected by the proposed project include the snowy plover, California least tern, peregrine falcon, sea otter, and harbor seal. The least tern and snowy plover nest near the launch site. These include Purisma Point (which is approximately one mile north of the launch site), the mouth of the Santa Ynez River (which is approximately 3.2 miles south of LSC 576E), and the mouth of the San Antonio Creek (approximately 3.2 miles north of LSC 576E). The snowy plover also nests on several beaches near the launch site. There are 12.4 miles of sandy beach on VAFB that provide nesting habitat for the snowy plover. This area includes 7.7 miles of beach north of Purisma Point (approximately 1 mile north of the launch site), 1.1 miles north of the Santa Ynez River (which is 3.2 miles south of the launch site), and 3.7 miles south of the Santa Ynez River. (U.S. Fish and Wildlife Service snowy plover monitoring report, February 2, 1994.)

The brown pelican and the peregrine falcon reside on VAFB. The brown pelican does not nest on the base, but forages and roosts on much of the coastal areas of the base (included near all three launch sites). Since the brown pelican does not nest on VAFB, launch activities from any of the three proposed sites will not significantly affect this species. Launch noise may startle a roosting pelican, but this impact will be minor and temporary. Additionally, the Taurus vehicle will not generate a large enough acid cloud to affect the pelican. The peregrine falcon nests on south base, including areas near Spaceport and possibly near SLC-2W. They periodically forage and roost near the LSC 576E. Neither the noise nor ground acid cloud will have a significant effect on foraging falcons in the vicinity of LSC 576E. Any launch effects at this site will be temporary and minor.

Several species of marine mammals visit coastal areas near all three launch sites. The Southern sea otter utilizes several rocky areas along the VAFB coast, including Purisma Point (which supports a small breeding colony). Additionally, there are breeding populations of harbor seals near both LSC 576E and Spaceport. Finally, California sea lions haul out at various locations along the VAFB coast. Since the sea lion does not breed near the launch sites and since this species is tolerant of human activities, the launches will not significantly affect the sea lion.

2. Peregrine Falcon. The applicant has concluded that launch noise and sonic booms will not adversely affect any peregrine falcons nesting near Spaceport or SLC-3W. The applicant describes the potential impact to the peregrine falcons as follows:

> *Peregrine falcons frequently nest on the rocky cliffs to the west of the Spaceport. This raptor species has been studied for its responses to noise pollution. Ellis et al. (1991) found that peregrine falcon behavioral and reproductive responses to real and simulated sonic booms are minimal. Of 12 peregrine nests tested for noise disturbance during the nesting cycle, 83 percent (10) fledged young. The re-occupancy and productivity rates for these test nests, were within or above expected values for self-sustaining falcon populations (Ellis et al. 1991, Newton 1979).*

Based on previous scientific studies of the effect of noise on peregrine falcon and similar birds, the applicant concludes that noise from launch activities at the proposed facility will not adversely affect the falcon. Although the applicant believes that the effect on the peregrine falcon will not be significant, it has developed an extensive monitoring program. The applicant has based its program on the monitoring program developed by Lockheed for its launch activities at SLC-6 and for the construction and operation of the Spaceport (See CD-88-93 and CC-42-94). That program includes monitoring of falcon nests before and after launch events. The applicant concludes and describes the monitoring as follows:

> *It is concluded from this evidence that peregrine falcons will not suffer any ill effects from operations at either SLC-3W or the Spaceport. To support this, peregrine falcons will be monitored ... at the coast to: (a) gather baseline biological data prior to a launch, and (b) determine if a rocket launch during the breeding season will result in mortality and/or reduced reproduction. This will be done in cooperation with the Vandenberg Air Force Base and the U.S. Fish and Wildlife Service.*

3. <u>Marine Mammals</u>. Like the impacts to the falcon, the project's effects on harbor seals are difficult to determine. Launch activities from either LSC 576E or Spaceport has the potential to affect harbor seals. Both the Rocky Point (near the Spaceport) and Purisma Point (near LSC 576E) areas provide haulout and breeding areas for harbor seals. Launch noise could result in effects on this marine mammal. These animals are easily disturbed by human activities. This disturbance could result in abandonment of the haul out areas or interfere with their breeding and rearing activities.

In past projects, the Commission has considered the impact from launch activities on marine mammals (CD-21-82 -- Space Shuttle, CD-28-90 -- Titan IV/Centaur, CD-88-93 -- Lockheed Launch Vehicle at SLC-6, and CC-42-94, California Commercial Spaceport). In those consistency reviews, the Commission found that noises generated from launches of those vehicles will not significantly affect marine mammals, assuming noise levels would occur as predicted, and with adequate monitoring and mitigation (if monitoring were to show adverse impacts). Since the Taurus is significantly smaller than either the Space Shuttle or the Titan IV/Centaur vehicles, the launch noise generated from this vehicle will be significantly less than the military vehicles. Therefore, the impact to marine mammals will be less than that from either the Space Shuttle or the Titan IV/Centaur. Nevertheless, OSC will participate in a marine mammal monitoring study to verify these conclusions. The applicant will implement its monitoring program incorporation with VAFB and the National Marine Fisheries Service.

Additionally, the project will not significantly affect the Southern sea otter. The Purisma Point sea otter colony is far enough away from the launch site to avoid effects from acid ground clouds generated by the launch. Additionally, launch noise will not affect the otter. The sea otter spends most of its time in the water. Any startle response would probably cause it to dive under water. The worst effect from this response would be to separate mothers from pups. However, mothers regularly leave their pups while foraging. Therefore, any additional separation would not significantly affect the sea otters.

4. California Least Tern And Western Snowy Plover. Neither Spaceport nor SLC-3W are near enough to nesting habitat of the California least tern and Western snowy plover to affect them. However, both the snowy plover and the least tern are potentially affected by launch activities from LSC 576E. Both these species nest near the Santa Ynez River and Purisma Point. Since the Santa Ynez River populations are approximately three miles from the launch site, Taurus launches will not significantly affect those nesting sites. However, the Purisma Point nesting areas are approximately one mile from the launch site and potentially affected by launch activities.

In 1993, at the request of the Air Force, the U.S. Fish and Wildlife Service (Service) published a biological opinion for missile launches from two sites on VAFB, SLC-2W and SLC 576E. That biological opinion covered three launches of Taurus vehicles for LSC 576E and two launches of Delta II rockets from SLC-2W. The Service believes that launch noise and emissions from these facilities could potentially affect both species. The Service recommended additional mitigation to protect both species. The mitigation includes monitoring of acoustic and emission levels, increased monitoring of the species, predator control, and a prohibition of launching during the nesting season when the wind is blowing towards the nesting sites. The Service concluded that because of the additional mitigation measures and the distance between the launch sites and the nesting areas, that the launches will not affect either species.

Based on these mitigation measures and the Service's finding of no significant impact, the Commission finds that the proposed launches will not significantly affect the plovers or the terns.

5. Conclusion. In analyzing the project's impacts on endangered and sensitive species, the Commission is guided by Sections 30230 and 30240 of the Coastal Act. For the Commission to concur with this consistency certification, the Commission must find that the project will not significantly degrade the endangered species habitat and will maintain healthy populations of these species. Since the applicant's analysis of existing studies and information suggests that the project will not affect the any of the species discussed above, and the applicant has agreed to monitor the impacts to the falcon, harbor seal, least tern, and snowy plover from launch activities, the Commission finds that the proposed project will protect habitat resources of the coastal zone. Therefore, the Commission finds that the project is consistent with the Marine Resources and Environmentally Sensitive Habitat protection 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. Under the State Health and Safety Code, the State Air Resources Board 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 (0_3), as well as for the state fine particulate matter standard (PM_{10}, 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 threshold, 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 activity involving air emissions is the rocket launches. The APCD does not have regulatory authority over these mobile sources. In analyzing launch emissions, the applicant notes the primary pollutants are aluminum oxide, hydrogen chloride, carbon monoxide, and carbon dioxide. 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 anticipated 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 compliance with that Act's "Conformity Rule" would be required 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 operations at SLC 576E, including launches, would 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. <u>Water Quality Resources</u>. 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 applicant will collect and test waste 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 Taurus launch vehicles generate a small amount Hydrogen Chloride and Aluminum oxide (the main components of the acid ground cloud),

the lack of sensitive species in the immediate vicinity of the launch sites, and the buffering capacity of the soil in the area. Therefore, the Commission finds that the proposed project is consistent with the water quality protection policies of the CCMP.

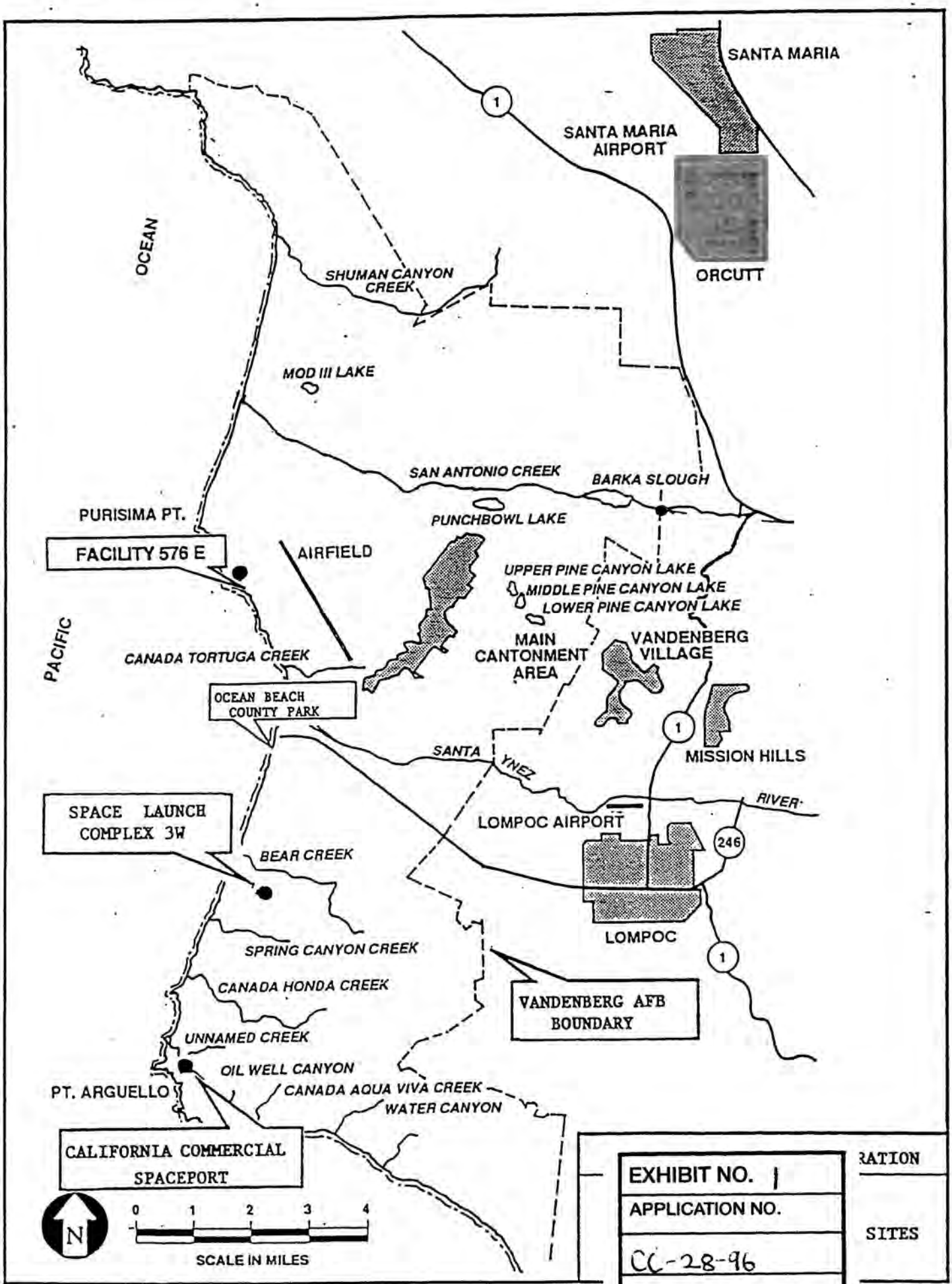
F. Oil Spills. There is a potential for the launch activities at VAFB to damage offshore oil platforms and cause an oil spill. Section 30232 of the Coastal Act requires protection of coastal resources from oil spills. That section provides:

> *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 applicant recognizes the potential for an accident during launch damaging an offshore oil platform. According to the applicant, this project is subject to the same safety requirements as 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, 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.



RATION

SITES

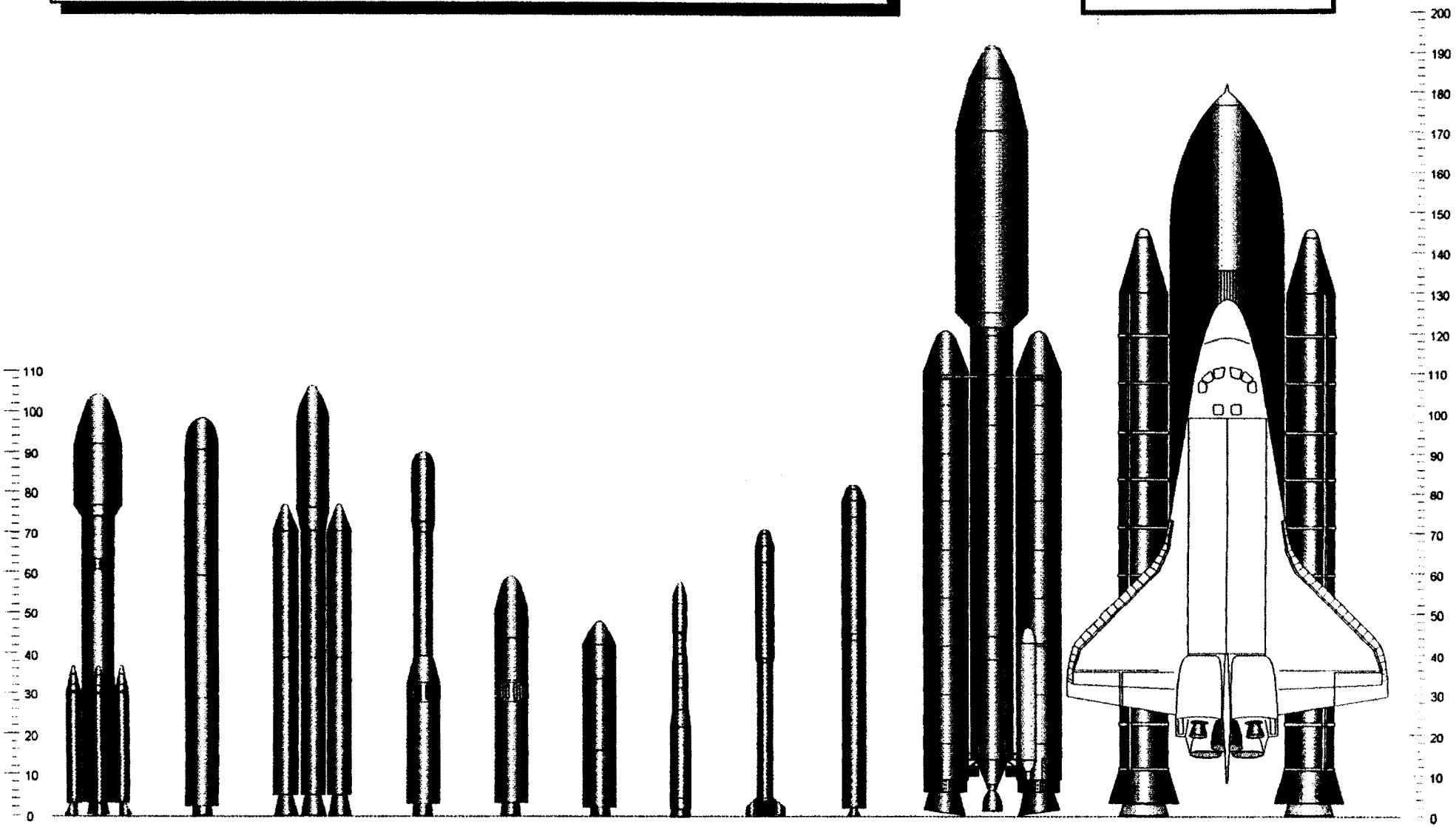
EXHIBIT NO. 1

APPLICATION NO.

CC-28-96

EXHIBIT NO. 2
APPLICATION NO.
CC-28-96

Launch Vehicle Comparisons



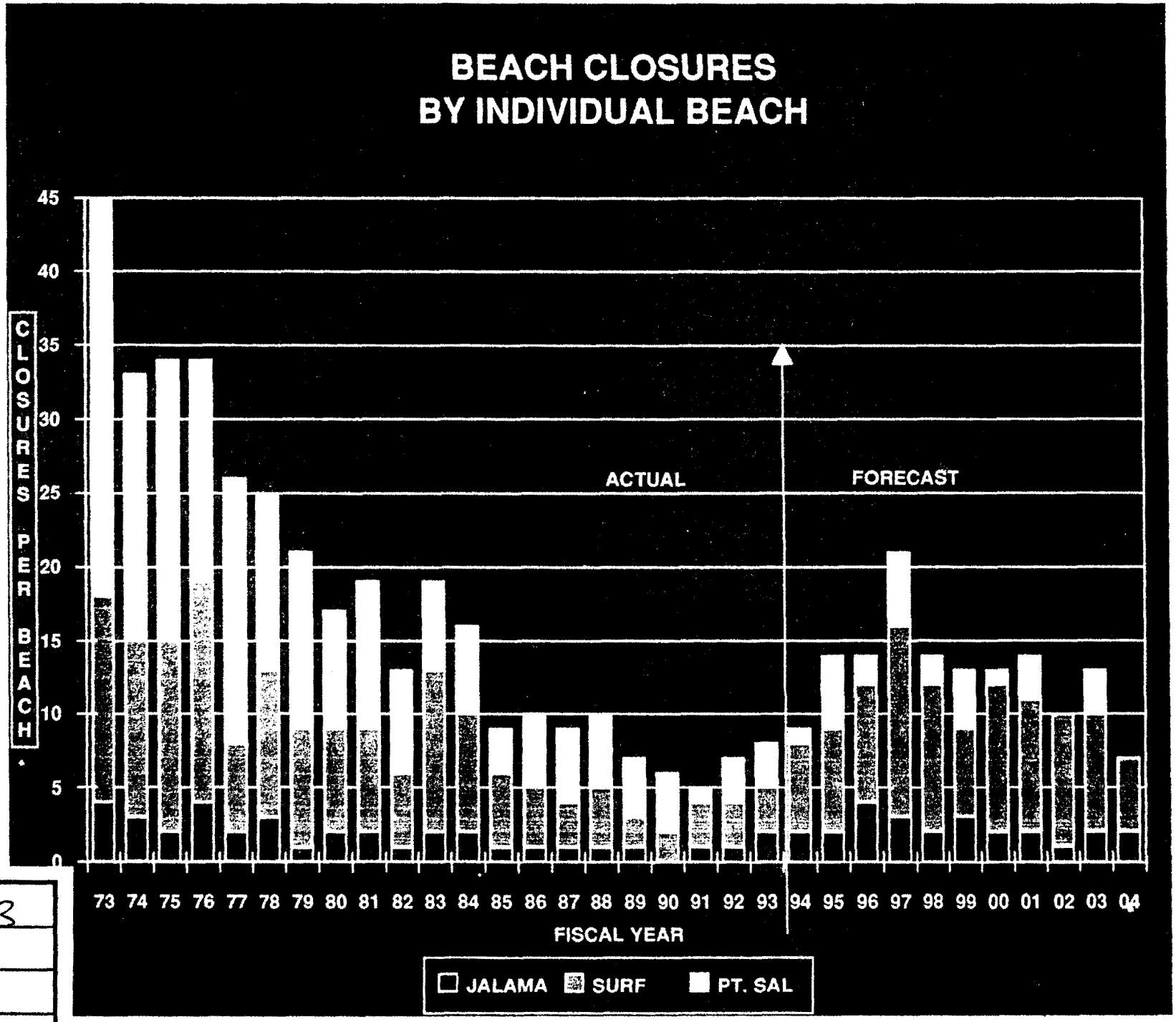


EXHIBIT NO. 3
APPLICATION NO.
CL-28-96

94-DAE EX IBM

30 SP/XPR

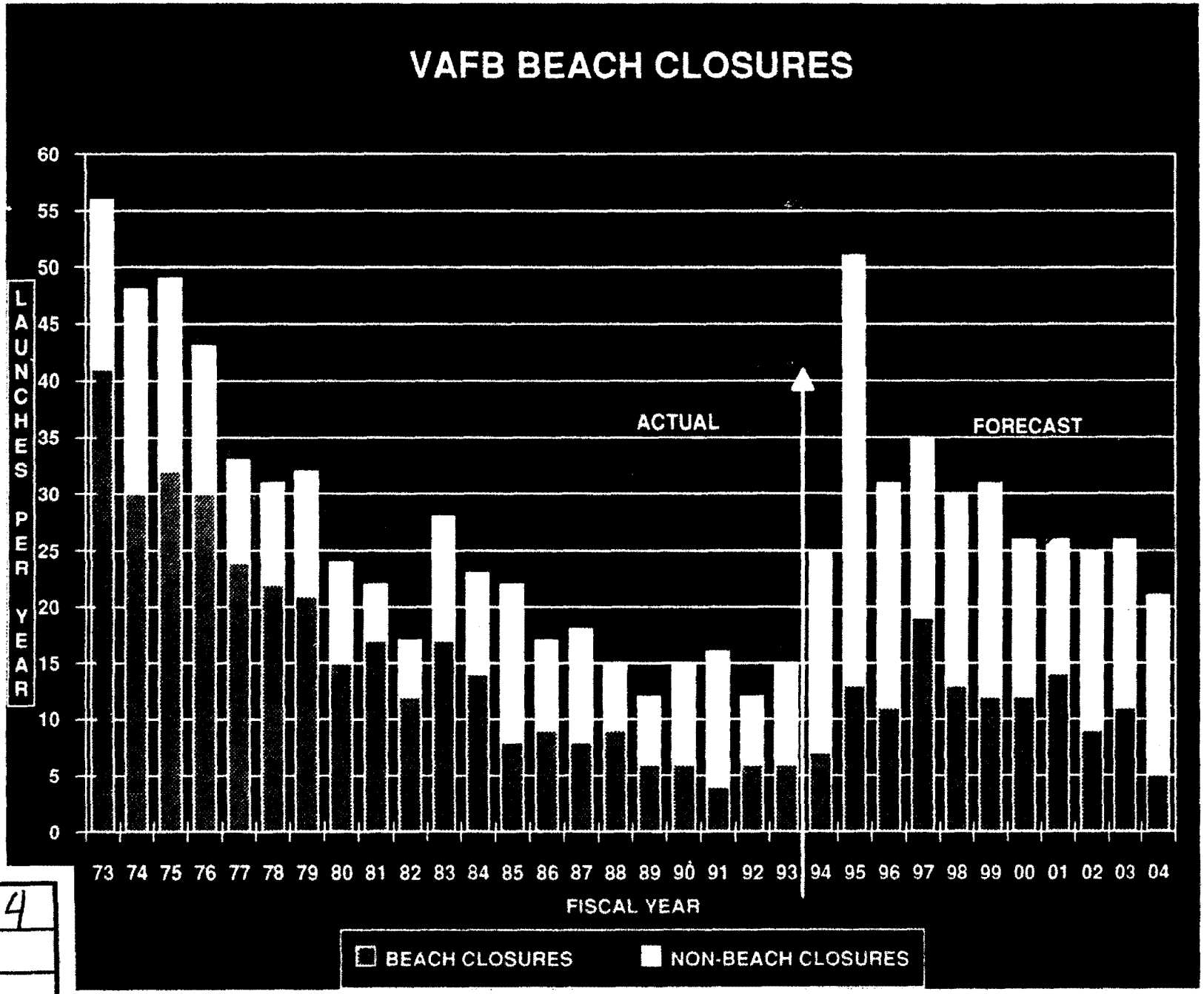


EXHIBIT NO. 4

APPLICATION NO.

CC-28-96

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30 SP/XPR

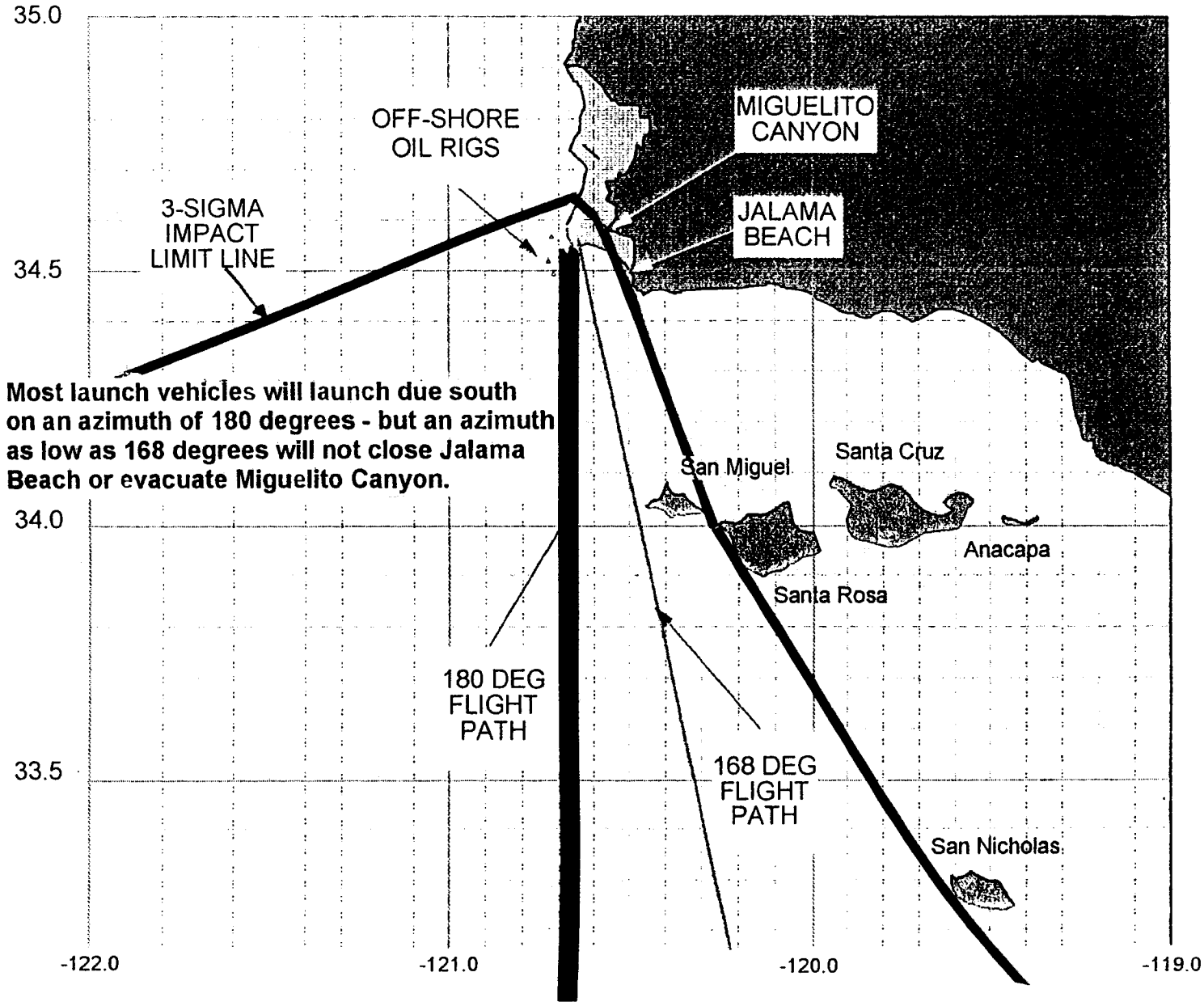

FIGURE 5 SLC 3W/CCS RANGE FLIGHT SAFETY ANALYSIS

EXHIBIT NO. 5
APPLICATION NO.
CC-28-96

c/ccc/mpa