FINDING OF NO SIGNIFICANT IMPACT
ENVIRONMENTAL ASSESSMENT FOR
TAURUS STANDARD SMALL LAUNCH VEHICLE PROGRAM

AGENCY: United States Air Force, Headquarters Space Systems Division

COOPERATING AGENCIES: Defense Advanced Research Projects Agency
United States Air Force Space Command

ACTION: Proposed Taurus Standard Small Launch Vehicle (SSLV) Program, which will provide inexpensive, rapid response, transportable launch services for small satellite payloads.

BACKGROUND: Pursuant to the National Environmental Policy Act, the Council on Environmental Quality regulations implementing the Act (40 CFR 1500-1508), Department of Defense (DOD) Directive 6050.1, Air Force Regulation 19-2, which implements these regulations in the Environmental Impact Analysis Process (EIAP), and other applicable Federal and local regulations, the U.S. Air Force (USAF) has conducted an assessment of the potential environmental consequences of the proposed implementation of the Taurus SSLV Program.

SUMMARY: In support of the U.S. Department of Defense (DOD) space program and the Advanced Space Technology Program (ASTP), the Defense Advanced Research Projects Agency (DARPA) is proposing to flight test the Taurus SSLV, developed by Orbital Sciences Corporation (OSC), at Vandenberg Air Force Base (VAFB), California. The USAF Space Systems Division (SSD) and Space Command (SPACECOM) have agreed to assist DARPA in the environmental process for the Taurus program.

The Taurus program will provide inexpensive, quick turnaround, transportable launch services for small (1,000 to 3,000 lb.) satellite payloads. An Initial Launch Capability (ILC) of 15 October 1992 is planned. One demonstration launch is planned. A maximum of three DOD launches per year is possible if contract options are exercised and are analyzed in this EA. Payloads for the first launch have been analyzed for processing, launch, orbit and deorbit impacts.

Although the Boathouse Flats area is analyzed as an alternative in the attached Environmental Assessment, this FONSI approves only the use of Facility 576E as a Taurus launch site for up to three DOD missions per year, and for Facility 1610 to process the payloads for the demonstration launch. Payloads for future launches would require further analysis. The use of Boathouse Flats, if desired as a second launch site, will also require further analysis; potentially significant impacts include public access, safety and marine mammals.

Taurus facility construction would include modifications to the existing Facility 576E, including adding a dry launch pad area, temporary installation of guard shacks and added security fencing within the present fenced area. This activity will not proceed without receipt of "no jeopardy" opinions from the U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS), and a "no effect" determination from the California State Historic Preservation Officer (SHPO). Processing activities for the solid rocket motor stages would take place at the manufacturer's facilities in Utah. Existing paved areas, access roads and parking areas would be used at Facility 576E.

The Taurus SSLV launch operation would be fully transportable, and demonstrate launch capability from a dry pad (i.e., bare concrete and no power). The launch vehicle and ground support equipment will be transported to the site for launch, and removed after launch. The Taurus SSLV will not be launched from Facility 576E during the period from April 15 through the end of August to avoid impacts to the nesting activities of the California Least Tern, an endangered marine bird that breeds along the coast near that facility.

Alternatives to the proposed action include initiating a new military development program, launching from Boathouse Flats, and the No Action alternative. An Air Force development program for a standard small launch vehicle would require long lead time and funds in excess of the budgeted amount. Therefore it would not meet mission schedule requirements. Also a military development program would not foster the promotion of commercial space launch activities. Launching from Boathouse Flats is not supported by the findings of this EA and would require further analysis. The No Action alternative was determined not to be a viable solution for meeting DOD mission requirements for assured access to space for this class of tactical payloads. It has been determined that acquisition of launch services and use of available launch sites and facilities at VAFB would present the most reasonable course of action for meeting mission requirements, technical needs, costs, and engineering design considerations.

The potential environmental effects of the proposed Taurus program were assessed for 14 environmental components: air quality, hydrology and water quality, geology and soils, biota, visual resources, population, land use, community facilities and services, transportation, economy, waste management, health and safety, noise, and cultural resources. Eliminating Boathouse Flats as an alternative, the proposed action was determined to have no significant effect on geology and soils, visual resources, population, land use, community facilities and services, transportation, economy, waste management and health and safety.

Potentially significant impacts to air quality, water quality, biota, noise and cultural resources were identified in the evaluation. It was found that these impacts could be avoided or reduced to a level of insignificance by the inclusion of specific mitigation measures or project procedures, which would become part of the program. Required consultations with SHPO, USFWS and NMFS should be completed by the end of the 30-day public notification and comment period.

The proposed action would contribute to cumulative effects on air quality, biota, transportation, waste management, noise, and global effects such as space debris and global warming. Mitigation measures will reduce the magnitude of potential cumulative effects, with the exception of orbital debris, for which no mitigation is currently available. It was found that the net contribution to cumulative effects resulting from the proposed action would not be significant for any of the environmental consequences.

FINDINGS: The EA evaluated the environmental sensitivities of Facility 576E considered for the Taurus SSLV, and the processing, launch, orbit and deorbit of the first payload. Potential direct, indirect and cumulative impacts will be avoided through careful project design or operational procedures, adherence to regulatory and premit requirements, and specific mitigation efforts. The proposed action will not result in significant impacts to the environment.

This finding of no significant impact is subject to the coordination of SHPO, USFWS and NMFS. These agencies have been contacted and provided with the Preliminary Final Environmental Assessment as well as supplemental data. No significant issues have been identified and no delays are anticipated for the required approvals. If any of those agencies find the EA to be deficient in any fashion which could result in a different conclusion, the

environmental impact analysis process (EIAP) will be reopened to appropriately deal with the matters identified during the consultations.

POINT OF CONTACT: A copy of the Taurus Standard Small Launch Vehicle Program Finding of No Significant Impact and Environmental Assessment, April 1992, may be obtained from, or comments on these documents may be submitted to:

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APPROVED: HQ SSD Environmental Protection Committee

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