



DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
(INSTALLATIONS AND ENVIRONMENT)
1000 NAVY PENTAGON
WASHINGTON, D.C. 20350-1000

MAY 17 1999

MEMORANDUM FOR THE ASSISTANT JUDGE ADVOCATE GENERAL OF THE NAVY
(ADMINISTRATIVE LAW)

Subj: RECORD OF DECISION FOR INCREASED FLIGHT AND RELATED
OPERATIONS IN THE PATUXENT RIVER COMPLEX, PATUXENT RIVER,
MARYLAND

Encl: (1) Subject Record of Decision

1. I request that enclosure (1) be published in the Federal Register as soon as possible. Questions concerning publication of the notice may be directed to Ms. Kimberley DePaul at (703) 604-1233.

Elsie L. Munsell

ELSIE L. MUNSELL
Deputy Assistant Secretary of the Navy
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DEPARTMENT OF DEFENSE
Department of the Navy

**Record of Decision for Increased Flight and Related Operations in
the Patuxent River Complex, Patuxent River, Maryland.**

AGENCY: Department of the Navy, Department of Defense

ACTION: Notice of Record of Decision

SUMMARY: The Department of the Navy, after carefully considering the operational and environmental consequences, announces its decision to increase flight and related operations in test areas comprising the Patuxent River Complex, MD.

FOR FURTHER INFORMATION CONTACT: Ms. Elleen Kane, NAS Patuxent River Public Affairs, 2268 Cedar Point Road, Bldg 409, Patuxent River, MD 20670, telephone 301-342-7710.

SUPPLEMENTAL INFORMATION: The text of the entire Record of Decision (ROD) is provided as follows:

The Department of the Navy (DON), pursuant to Section 102(c) of the National Environmental Policy Act (NEPA) of 1969 (42 USC Section 4331 *et seq.*) and regulations of the Council on Environmental Quality (CEQ) that implement NEPA procedures (40 CFR Parts 1500-1508), hereby announces its decision to increase flight and related operations in test areas comprising the Patuxent River Complex, MD as set forth in Operational Workload III, which is

identified as Preferred Alternative in the Final Environmental Impact Statement (FEIS).

Operational Workload Alternative III provides for up to 24,400 flight hours per year, including up to 21,100 annual flight hours for research, development, test, and evaluation (RDT&E) activities and related support, and up to 3,300 annual flight hours of military training support. Non-flight and laboratory test activities will operate at levels proportional to the increase in flight operations. This level of future operations is based on foreseeable mission requirements and the complex's unique airfield, facility, and range capabilities. As a result, the complex will have the flexibility to accept new and variable workloads, thereby increasing efficiencies and lowering costs to users.

The test areas involved are under the exclusive control and scheduling authority of the Naval Air Warfare Center, Aircraft Division (NAWCAD). They include Naval Air Station (NAS) Patuxent River (with all its flight and ground test facilities, runways, and associated airspace); Outlying Field (OLF) Webster Field (with its flight test facilities, runways, and associated airspace); and the Chesapeake Test Range (CTR) (including its restricted airspace, aerial and surface firing range, and Hooper, Hannibal, and Tangier Island targets). Combined, these test areas are identified as the Patuxent River Complex.

Implementation of the action will be phased in as needed to support additional workloads beginning in mid-1999.

PROCESS

A Notice of Intent (NOI) to prepare an EIS for increased flight and related operations in the Patuxent River Complex was published in the *Federal Register* on April 1, 1997, and in local and regional newspapers twice, one and three weeks prior to the scoping meetings. Five public scoping meetings were held between May 6 and May 15, of 1997 in Prince Frederick, MD; Leonardtown, MD; Burgess, VA; Crisfield, MD; and Cambridge, MD. Comments received during the public scoping meetings were considered in the preparation of the Draft EIS (DEIS).

A Notice of Availability (NOA) for the DEIS was published in the *Federal Register* on May 15, 1998 and in local and regional newspapers twice, one and three weeks prior to the scheduled hearing dates. Public hearings were held June 10 through June 22 of 1998, in Lusby, MD; Cambridge, MD; Heathsville, VA; and Great Mills, MD. The DON received 330 comments on the DEIS from 2 Congressmen, 4 federal agencies, 17 state agencies, 2 regional agencies, 6 local governments, 11 non-governmental organizations, and 93 private citizens. All verbal and written comments are addressed in Chapter 10 of the FEIS.

The NOA for the FEIS was published in the *Federal Register* on December 18, 1998. Public notices and news releases noting the

availability of the FEIS were published in local and regional newspapers the following week. Copies of the FEIS and DEIS are available for public review in 18 repositories around Chesapeake Bay and will continue to be available for 60 days following the signing of this Record of Decision. The DON received 29 public comments on the FEIS during the 30-day public comment period.

ALTERNATIVES CONSIDERED

The three alternatives considered in this FEIS focus on the efficient use of existing facilities and personnel in the Patuxent River Complex and provide for the continuation of and increase in RDT&E flight operations and non-flight laboratory activities, and additional support for military training activities. The preferred alternative (Operational Workload Alternative III) could accommodate up to 24,400 flight hours per year. Operational Workload Alternatives I and II could accommodate up to 20,700 and 22,600 flight hours per year, respectively. Implementation of any alternative will: (1) maintain existing boundaries of the special use airspace and restricted surface areas in the CTR; (2) continue airfield daily operating hours at current, or slightly modified operating hours; (3) require no additional permanent and transient employees at NAS Patuxent River and OLF Webster Field or construction of major new facilities beyond those constructed as a result of previous Base Realignment and Consolidation decisions.

The Navy also evaluated a No Action Alternative that maintained flight and related operations at current levels of intensity (18,200 annual flight hours). The No Action Alternative anticipated changes in the future mix of aircraft (i.e., both the addition of new aircraft/aircraft systems that may be tested for Navy acquisition and the retirement and/or replacement of aging aircraft/aircraft systems).

ENVIRONMENTAL IMPACTS

The Department of Navy analyzed the impacts of the alternative proposals, considering the following factors: land use and coastal zone management; socioeconomic; community facilities and services; transportation; infrastructure; air quality; noise; ordnance, hazardous materials management, and radio frequency sources; topography, geology, and soils; vegetation and wetlands; terrestrial and aquatic wildlife; water and sediment quality; and aircraft operations and safety. Potential cumulative impacts of the proposed action and consistency of the proposed action with federal policies addressing environmental justice and environmental health risks to children were also considered. Based upon these analyses the Department of Navy finds that no significant impacts will result from implementation of the preferred alternative (Operational Workload Alternative III).

Mitigation

Even though no significant impacts would result from implementation of the preferred alternative, public comments outlined concerns with several operational issues. As a result, the Navy is implementing a series of measures in response to public complaints about aircraft noise disturbances, supersonic events, sufficiency of pilot awareness briefs, Unmanned Aerial Vehicle (UAV) operations in the CTR, and the operation of an open-air aircraft engine test cell at NAS Patuxent River.

Aircraft Noise Disturbances - NAS Patuxent River will establish formal procedures to ensure proper handling of and response to noise/aircraft disturbance reports. The procedures will include the compilation of a centralized database of noise disturbance reports, and a monthly review of these reports by the NAS Patuxent River Air Installation Compatible Use Zone (AICUZ) officer. When appropriate, corrective action to minimize future noise disturbances will be taken.

Supersonic Events - The Navy will undertake two measures with respect to supersonic flight testing. First, supersonic flights below 30,000 ft in the CTR will be restricted to supersonic test flights for weapons separation. Supersonic flights above 30,000 ft will be in response to mission-critical needs only. Second, a sonic boom monitoring system will be installed in the CTR. Data records from the monitoring system, when used in combination with

noise/aircraft disturbance reports, will identify the need for corrective action to be taken, or to suggest operational or procedural modifications that will minimize sonic boom impacts.

Pilot Awareness Briefs - The Navy will expand existing briefings on aircraft operations procedures to all users of the CTR to ensure an understanding of proper procedures and mitigation measures adapted as a result of this study.

UAV Operations in the CTR - The operation of UAVs in a constricted area of the CTR over the Northern Neck of Virginia has resulted in overflights of the same location numerous times during each mission. These overflights subject residents of the Northern Neck to a low level of noise during daylight hours of the work week. To mitigate this situation, the Navy will increase the flight area within the CTR that UAVs use for routine training purposes. These alternative UAV operating areas are being identified by the Navy using detailed demographic and land use data to avoid overflights of densely populated areas. This expansion of prescribed airspace will greatly reduce UAV presence and noise at any one location.

Operations at the Open-Air Aircraft Engine Test Cell - At various times during the first and second quarters of 1998, the enclosed engine maintenance test cell was temporarily unavailable. This situation caused the tempo and type of operations at the open-air aircraft engine test facility at NAS Patuxent River to increase. A continuing need exists to conduct critical engine tests

at this facility. However, the Navy will minimize use of the open-air aircraft engine test facility by eliminating aircraft turbofan and turbojet engine maintenance runs, except for mission-critical situations where the enclosed engine maintenance test cell is unavailable for an extended period of time and approval of the Commanding Officer of NAS Patuxent River has been obtained. In addition, the Navy will investigate: (1) feasible technical solutions to reduce the noise associated with operations at the open-air aircraft engine test facility and (2) the technical feasibility of developing an alternative back-up site for the enclosed engine maintenance test cell to further reduce the likelihood that the open-air aircraft engine test facility will be required for aircraft jet engine maintenance runs.

EIS Implementation Plan - The Navy has prepared an EIS Implementation Plan that has been approved by NAS Patuxent River and the NAWCAD Atlantic Ranges and Facilities Department. This plan provides policy and direction that will ensure that the operational mitigation and monitoring specified in this Record of Decision will be executed. The NAS Operational Environmental Planning (OEP) Office is responsible for data administration. The NAS Public Affairs Office (PAO) will provide public interface support.

**RESPONSE TO COMMENTS RECEIVED REGARDING THE FINAL ENVIRONMENTAL
IMPACT STATEMENT**

The DON received 29 comments on the FEIS from 1 federal agency, 4 state agencies, 3 local governments, and 2 private citizens. Some comments received were editorial in nature, had been addressed in the FEIS and thereby required no further discussion, or, simply disagreed with conclusions of the FEIS but did not present new or additional information that substantially affected the FEIS analysis. Substantive comments organized by subject matter are addressed below.

Aircraft Noise - The Calvert County Board of Commissioners questioned the population data used in the computer noise models and the conclusions reached from the modeling results. The noise modeling analyses are based on standard procedures widely used for commercial and military airfields. These procedures have been validated and are sufficient to predict the resultant noise levels in the CTR from the additional aircraft operations. To maintain consistency in the noise analysis conducted for the CTR, US Census 1990 data were used to characterize the existing and future population. These are the only data that provide population statistics on a census tract basis. Only a very small portion of the population of southern Calvert County (i.e., the southernmost tip of Drum Point) would be impacted by airfield-related noise levels of 65 to 70 dB DNL. In addition, in response to comments on the DEIS, text was added to FEIS Subchapter 4.1 (page 4.1-2) to

acknowledge the significant current and future growth in the Solomons area that is changing in character from a rural residential area to a more densely-populated suburban community.

Water and Sediment Quality - The Virginia Department of Environmental Quality (VDEQ) Tidewater Regional Office requested clarification on the amount of lead that would be released into the Chesapeake Bay in the form of lead bullets. The FEIS states on page 4.13-5 that an estimated 1.0 cu ft of lead (about 0.5 cu ft of lead more than identified under the No Action Alternative) could be released annually into the Bay under the preferred alternative (Operational Workload Alternative III).

The VDEQ Tidewater Regional Office also requested additional analysis on the potential water quality impacts of continued use of target areas in Chesapeake Bay. The existing Environmental Monitoring and Assessment Program (EMAP) sampling data for Chesapeake Bay were performed by the Environmental Protection Agency. However, the DON did undertake sediment and water sampling (Sirrinc study) in 1991 at several water range and target locations in North Carolina that have been impacted by about 40 years of military bombing activities. The results of the Sirrinc study showed no significant differences in water and sediment quality between the range areas and non-range areas and support the conclusion of the FEIS that the surface water impacts of either the No Action Alternative or the preferred alternative will not adversely affect water or sediment quality in the Bay. The

Department of Navy has decided, therefore, that narrowly focused sampling in the vicinity of the targets would only be required as a result of changes in ordnance volume or type or some indication of significant water or sediment quality degradation.

Furthermore, the Environmental Protection Agency's EMAP metals data for Station VA 91-303 (FEIS page 4.13-3) are for sediment samples. These data are not directly comparable to Maryland State Water Quality Standards because those standards are not applicable to measuring solid phase contaminants. Instead, these data were more appropriately compared to the Effects Range Median (ER-M) criterion, which is the concentration of a contaminant that will result in ecological effects approximately 50 percent of the time based on scientific literature studies. The data for EMAP Station VA 91-303 do not exceed the ER-M threshold for any metal. When EMAP data are examined for other stations in proximity to the target areas, particularly Hannibal target where most lead bullets are likely to be found, no pattern of elevated metals can be discerned. Therefore, the DON reaffirms the conclusion stated in the FEIS that the presence of elevated metals at EMAP Station VA 91-303 is not related to Navy use of the target areas.

Air Quality - The VDEQ Office of Air Data Analysis recommended that the Final Environmental Impact Statement (FEIS) address air pollutant dispersion (short-term effects) in the CTR area, especially under flight paths as a result of public complaints about "low-flying aircraft and dwellings laden with aircraft

exhaust/fuel." The emissions analysis contained in the FEIS was conducted pursuant to the Clean Air Act General Conformity Rule (40 CFR 51 and 93). The results of this analysis show that air emissions resulting from implementation of the preferred alternative would be well within the budgeted limits of Delaware, Maryland, and Virginia and not significant. Also, as noted on FEIS page 4.9-3, emergency fuel dumping is extremely rare in the CTR. DON policy prohibits fuel dumping below 6,000 feet above ground level unless necessary to save the pilot and/or the aircraft. Above 6,000 feet, the fuel has sufficient time to completely vaporize and dissipate before reaching the ground. Thus, any fuel dumping that occurs has less than significant impacts at ground level.

Coastal Zone Management - Worcester County, MD commented that implementation of the preferred alternative would be consistent with their plans, programs, and objectives provided increases in flight and related operations would not have a negative impact on the use and enjoyment of the county's ocean beaches and coastal bays. As the CTR does not include any portion of Worcester County, implementation of the preferred alternative would be consistent with the county's plans, programs, and objectives.

Aircraft Operations and Safety - One commentor expressed concern that the FEIS did not provide a "probabilistic risk analysis" of an aircraft crashing into the Calvert Cliffs Nuclear Power Station. First, it should be noted that the Calvert Cliffs Nuclear Power Station is located outside of the boundaries of the

CTR. Second, the critical structures at the power station (i.e., nuclear systems containment buildings) have been designed and constructed to withstand earthquakes, hurricanes, tornadoes, and the impact of a fully laden, fully fueled Boeing 707 without damage to the systems inside. Additionally, Baltimore Gas & Electric (BG&E), owner of the power station, concluded in its August 1997 Individual Plant Examination of External Events (a study required by the Nuclear Regulatory Commission [NRC]) that the probability of an aircraft crashing into the power station, including aircraft from NAS Patuxent River is very low (a probability of about 1.1×10^{-6} crashes per year). Only about 25 percent of this risk is assignable to aircraft from NAS Patuxent River. In another report to the NRC (Region 1 Inspection Report Nos. 50-317/97-06), BG&E concluded that there was no significant safety hazard represented by NAS Patuxent River aircraft. Lastly, BG&E is consulting with the NAS Patuxent River as it currently prepares its EIS to support an application to the NRC for re-licensing of the power plant. The risk of an aircraft operating in the CTR crashing into the Calvert Cliffs Nuclear Power Station is not significant and the DON has determined that a probabilistic risk analysis is not required.

Impacts to Calvert Cliffs State Park - The Calvert County Board of Commissioners expressed concern that increased flight and related operations in the Patuxent River Complex would impact the designation of Calvert Cliffs State Park as a "State Wildlands." This designation provides protection and benefits to the park's

water quality, wilderness research, and preservation of unique ecological communities and primitive recreation.

The park is located on the northern boundary of the CTR. Aircraft flight tracks for approaches and departures to NAS Patuxent River overfly the Drum Point peninsula to the south of the park and the results of the noise analysis show noise levels at the park to be less than 45 dB DNL, which is consistent with existing noise levels at the park. Consequently, implementation of the preferred alternative would not impact water quality, wilderness research, or the preservation of unique ecological communities and primitive recreation that may be conducted at Calvert Cliffs State Park.

CONCLUSIONS

Based on the analysis contained in the EIS, the administrative record, and the factors discussed above, I identify Operational Workload Alternative III (Preferred Alternative) as the course of action the Navy will implement at the Patuxent River Complex. Operational Workload Alternative III will best allow the Navy to meet current and future global defense challenges posed by a post-Cold War environment. It provides the Navy with the necessary flexibility to efficiently enhance use of Patuxent River Complex facilities and reduce costs to users. Use of the CTR and related laboratories and test support facilities for both manned and unmanned flight testing can be optimized without increasing construction or the number of personnel needed to complete the

mission. Navy operational air assets will be able to conduct effective training and pilot evaluation exercises using the technological, visual, and measurement assets that are integral to the instrumented airspace of the CTR. The flexibility in asset management and asset use that is achievable under Operational Workload Alternative III will create no significant impacts to the surrounding environment. The Navy will respond to public concerns involving aircraft and engine testing noise, supersonic events, and UAV operations through the mitigation measures described above.

17 May 1999
Date

Elsie L. Munsell
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