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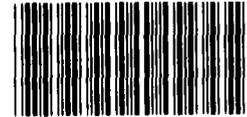
MISSION ANALYSIS AND  
SYSTEMS ACQUISITION DIVISION

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B-208889

SEPTEMBER 3, 1982

The Honorable Ted Stevens  
Chairman, Subcommittee on Defense  
Committee on Appropriations  
United States Senate



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Dear Mr. Chairman:

Subject: Information Regarding Trident II (D-5) Missile  
Configured Trident Submarine Costs and Schedule  
(GAO/MASAD-82-47)

In accordance with an agreement with your office, we are providing (1) Navy cost information on the Trident II (D-5) missile configured Trident submarine program and (2) the Navy's scheduled milestone estimates for the D-5 missile configured Trident submarines.

The Secretary of Defense announced in June 1982 the restructuring of the D-5 missile program. The restructured program has some positive aspects, such as avoiding procurement of Trident I (C-4) missiles and equipment for fiscal years 1981-84 Trident submarines and introducing the D-5 system into the fleet in slightly greater quantities over the current schedule. However, it also results in increased Trident submarine construction costs and time frames for fiscal years 1981-84 submarines to cover D-5 missile system related modifications.

We will provide additional information in the near future in response to your May 7, 1982, letter requesting information on the impact of slipping the second Trident submarine from the fiscal year 1983 program and the Navy's estimated program cost increase to accommodate such a change. As you know, the fiscal year 1983 Department of Defense (DOD) Authorization Act included full funding for only one Trident submarine configured with the more advanced D-5 submarine launched ballistic missile system. The Navy had requested a two submarine program configured with the C-4 missile in the DOD fiscal year 1983 budget request.

In developing this response, we reviewed DOD program documents, budget computations, correspondence, and other pertinent records and information. We discussed the Trident program and obtained data from officials within the Office of the Secretary of the Navy; the Naval Material Command Headquarters; and the Naval

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Sea Systems Command Headquarters in Washington, D.C. We also discussed this report with officials responsible for management of the Trident program.

Our review was performed in accordance with our "Standards for Audits of Governmental Organizations, Programs, Activities, and Functions."

#### BACKGROUND

Before June 1982, the Navy planned to install the C-4 submarine launched ballistic missile system in two fiscal year 1983 Trident submarines. Navy planning at the time of the fiscal year 1983 budget submission called for the advanced follow-on D-5 missile to achieve a 1989 initial operational capability. The Navy planned to backfit it into operating C-4 configured submarines. The first new construction D-5 configured submarine was to have been the fiscal year 1985 submarine.

As shown in enclosure I, the restructured program introduces the D-5 capability into earlier new construction submarines. The restructured program is still expected to retain the D-5 missile 1989 initial operational capability and also introduce the D-5 system into the Trident submarine fleet at a slightly increased rate. The Navy expects the restructured program to result in a total cost avoidance of about \$680 million (fiscal year 1983 dollars) to the fiscal year 1983 budget submission by the end of the Trident submarine procurement program.

#### COST INFORMATION ON D-5 MISSILE CONFIGURED SUBMARINE PROGRAM

Trident submarine program costs will increase for fiscal years 1981-84 <sup>1/</sup> funded ships due to procurement and installation of the D-5 launch tubes, navigation equipment, and fire control mechanisms. The Navy is confident that the restructured program will be less costly than the alternative of installing the C-4 system during new construction and subsequently backfitting these submarines with a D-5 capability.

To date, firm Navy estimates concerning the D-5 impact on Trident program costs are not available. However, preliminary estimates have been prepared by the Navy and provided to the Congress for the 9th and 10th D-5 configured submarines. The Navy has indicated that these cost estimates, although considered less

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<sup>1/</sup>No Trident submarines were funded in fiscal year 1982. The fiscal year 1985 and subsequent submarines were previously planned to be D-5 configured.

than budget quality, represent the best information presently available. The Navy is further defining the D-5 shipboard configuration and related costs for equipment and installation. According to the Navy, better estimates for the D-5 configured 9th and 10th submarines may be available in early to mid-September. The cost for the 11th submarine is expected to be reflected in the DOD fiscal year 1984 budget request.

According to the Navy's most recent cost estimate for the ninth submarine, the total cost to construct it as a D-5 configured submarine is \$1,692 million--including \$80 million for one-time costs that are traditionally charged to the lead ship of a class. This represents \$492 million more than the estimate for constructing the ninth C-4 configured submarine. The Navy's preliminary cost estimate to construct the 10th D-5 configured Trident submarine is \$1,816.4 million. This estimated cost represents about a \$332.2 million increase over the previously planned 10th C-4 configured Trident submarine.

ESTIMATED SCHEDULE MILESTONES  
FOR THE CURRENT D-5 MISSILE  
CONFIGURED SUBMARINE PROGRAM

The Secretary of Defense's decision to introduce the D-5 missile system into earlier submarine construction than initially planned will extend some submarine construction time frames. Trident program officials estimate that the length of time to construct the 9th, 10th, and 11th D-5 configured submarines will be extended over the previously planned C-4 configured submarine schedule by 12 months, 12 months, and 4 months, respectively. This extension is primarily a result of D-5 government-furnished equipment not being available to support the construction on these submarines. The Navy's current schedule milestones for D-5 missile configured submarines are shown in enclosure II.

As discussed with your office, due to time constraints, we did not obtain official DOD comments on this report but did discuss it with Trident program officials responsible for the management of the program.

As arranged with your office, unless the contents are publicly announced earlier, we plan no further distribution of this report until 30 days from the date of this report. At that time we will send copies to interested parties and make copies available to others upon request.

We hope this information will be useful to you and we would be pleased to provide any further information as it occurs.

Sincerely yours,



W. H. Sheley, Jr.  
Director

AFFECT OF D-5 RESTRUCTURING DECISION ONNEW CONSTRUCTION TRIDENT SUBMARINES FROMFISCAL YEAR 1983 BUDGET SUBMISSION TO CURRENT NAVY PLAN

Fiscal year	Navy plan before restructuring decision a/		Navy plan after restructuring decision a/		Current planned construction b/	
	SSBN designation	Missile configuration	SSBN designation	Missile configuration	SSBN designation	Missile configuration
1981	734 #9	C-4	734 #9	D-5	734 #9	D-5
1982	-	-	-	-	-	-
1983	735 #10 736 #11	C-4 C-4	735 #10 736 #11	D-5	735 #10	D-5
1984	737 #12	C-4	737 #12	D-5	736 #11	D-5
1985	738 #13	D-5	738 #13	D-5	737 #12	D-5

a/June 1982 Secretary of Defense announcement on D-5 restructuring decision.

b/The fiscal year 1983 Department of Defense Authorization Act shows full funding for only one Trident submarine configured with the D-5 submarine launched ballistic missile system.

THE NAVY'S CURRENT D-5 MISSILE CONFIGUREDSUBMARINE SCHEDULE MILESTONE ESTIMATES (note a)

<u>Fiscal year</u>	<u>SSBN designation</u>	<u>Contract award</u>	<u>Construction start</u>	<u>Delivery</u>	<u>Months from contract award to delivery</u>
1981	734 #9	01/82 <u>b/</u>	01/82 <u>b/</u>	12/88 <u>c/</u>	83
1983	735 #10	02/83	02/83	08/89 <u>c/</u>	78
1984	736 #11	12/83	01/84	04/90 <u>c/</u>	76
1985	737 #12	12/84	01/85	12/90	72
1986	738 #13	12/85	01/86	12/91	72
1987	739 #14	12/86	01/87	12/92	72

a/This table reflects the fiscal year 1983 Department of Defense Authorization Act.

b/Actuals.

c/Deliveries of D-5 missile system government-furnished equipment primarily controls the construction time frame of SSBN 734 (first D-5 submarine) through the SSBN 736.