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Survey Of The Navy's Proposed Patrol Hydrofoil Missile Ship Procurement Program B-160877

Department of the Navy

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**UNITED STATES
GENERAL ACCOUNTING OFFICE**

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APRIL 12, 1972



UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

PROCUREMENT AND SYSTEMS
ACQUISITION DIVISION

B-160877

NOTE: This is a declassified version of a classified report issued 4/12/72. Classified information has been omitted as indicated by blanks.

The Honorable
The Secretary of Defense

Attention: Assistant Secretary of Defense
(Comptroller)

Dear Mr. Secretary:

The General Accounting Office has made a survey of the Navy's proposed patrol hydrofoil guided missile ship (PHM) procurement program (Code 76903). The program consists of procuring the design and production of PHM's at a cost in excess of \$500 million. The military procurement bill for fiscal year 1972 provides \$5.1 million for design work and procurement of long lead time items consisting of waterjets, pumps, and selected ordnance equipments. The program calls for an additional \$46 million during fiscal year 1973 to complete the design work and to begin construction of two lead ships. The goal is to introduce the first ship to the fleet in .

North Atlantic Treaty Organization (NATO) countries are also expected to participate in the PHM program. At this time, however, their requirements in quantities, configurations, and delivery schedules are not known.

Our survey indicates that the PHM procurement plans are incomplete and changes are to be made. The plans do not include (1) weapons and sensors that are to be installed on the ships, or (2) technical and operational testing that will be required prior to the award of follow-on production contracts.

To date, the safeguards contained in Department of Defense (DOD) Directive 5000.1, prescribing the policy and procedures for acquiring major defense systems, have not been applied to the PHM program. Consequently, the Navy has provided only limited program visibility

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to the Secretary of Defense and his Deputy through the budgetary processes. We are therefore bringing this matter to your attention for consideration.

DOD policy and procedures for
major system acquisitions

Under Directive 5000.1, the Secretary of Defense or his Deputy make the decisions to (1) initiate major defense system acquisition programs, (2) proceed into full-scale development, and (3) begin production and deployment. This allows the Secretary to review risk assessments and results of demonstrations and tests before initiating or increasing program commitments.

Before receiving approval to begin large-scale production, the military services must demonstrate by test and evaluation that their proposed defense systems are technically and operationally suitable to perform their intended missions. This is the "fly before you buy" policy.

The directive is applicable to major acquisition programs so designated by the Secretary of Defense or his Deputy. This designation considers (1) dollar values (programs with estimated production costs in excess of \$200 million), (2) national urgency, and (3) recommendations by the military services or officials from the Office of the Secretary of Defense. The directive, however, states that the management principles contained therein are applicable to all programs.

The PHM program as a major
defense system acquisition

Since 1960 the Navy has spent approximately \$86 million developing the technology of hydrofoil ship platforms.

In 1968, after demonstrating the technical feasibility of small hydrofoil craft, the Navy began its studies to define a hydrofoil patrol ship system. The major conclusion from these studies was that hydrofoil ship systems with high speed, moderate endurance, and outstanding seakeeping capabilities using modern weapons would be a highly cost-effective supplement to existing and projected naval forces. The hydrofoil craft was judged to offer high performance with a small investment per ship and small personnel (manning) requirements.

In January 1971, the Navy prepared a draft of a Development Concept Paper (DCP) on hydrofoil ships and crafts. The question

presented in the draft was, should the Navy procure a nominal 150-ton missile carrying hydrofoil fast patrol craft as a joint NATO venture or unilaterally? The DCP draft was forwarded, by memo dated January 21, 1971, to the Director of Defense Research and Engineering (DDR&E) for review and comment.

The DCP was never finalized. It could not be, a DDR&E official explained, because (1) the NATO requirements were being negotiated and (2) the draft attempted to cover the continuing development program as well as the procurement of a prototype.

According to the DDR&E official, the Secretary of Defense approved the Navy's program to purchase PHM's as a part of the budgetary process. The PHM program is included in the Navy's annual budget requests and the DOD Five-Year Defense Plan.

Naval Ship Systems Command (NAVSHIPS) is proceeding with the design and acquisition of PHM's pursuant to an Advanced Procurement Plan (APP) approved by the Chief of Naval Material on October 22, 1971. In November 1971, the Navy awarded a contract to the Boeing Company for such services as design, technical plans, procurement of long lead time items, construction of mock-ups and performance of value engineering program requirements.

Officials of the NAVSHIPS stated that (1) the design for a 170-ton hydrofoil guided missile ship, as required by the PHM program, is merely an expansion of the design for the existing operational 60-ton gunboat, the TUCUMCARI, and (2) there are no significant technical uncertainties or risks. Accordingly, their draft of the APP showed the builder's trials of the two lead ships being performed concurrently with the award of the follow-on ship construction contracts.

Upon review of the APP, the Chief of Naval Material stated that if changes to the ships' specifications are required as a result of the builder's trials, the contracts would have to be modified and could ultimately result in claims against the Government. On October 22, 1971, he approved the APP on condition that contracts for the follow-on ships would not be authorized until after successful completion of the approved test plan. The builder's trials, however, do not include operational testing of the lead ships with their proposed weapons and sensors installed.

The Chief of Naval Material also noted in his review, that the APP indicated the ships would be outfitted with missile/gun weapons systems without identifying the systems. The Chief stated the APP should be revised as soon as possible to include planning for these weapons systems.

A DDR&E official advised us that before follow-on production is authorized, the Navy will be required to prepare a DCP or Program Memorandum for approval by the Secretary of Defense. He added that this decision document will confirm that tests have demonstrated the operational suitability of the production prototypes (lead ships). At the time of our review, however, the APP did not define the operational test requirements nor did its schedules provide for the successful completion of operational tests before the award of follow-on contracts.

It is not clear to what extent the DDR&E and/or the Chief of Naval Material may eventually require technical and operational testing of the hydrofoils with their missile/gun weapon suits before award of the follow-on production contracts. As long as this question on testing exists, planning for the PHM program is substantially incomplete.

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We have tentatively classified this letter as CONFIDENTIAL because it contains information obtained from the classified APP document. Our review of congressional committee reports and other publications indicates that the information contained in this letter has been declassified. Therefore, we would appreciate you reviewing the security classification and downgrading it to unclassified. If this is not possible, please indicate the classification on a paragraph by paragraph basis with the specific classified data underlined and authorize us to release copies of the letter to the House and Senate Committees on Armed Services and Appropriations. Your reply within 10 days regarding the classification of this letter is desired.

We would appreciate receiving your views and advice concerning any actions taken or planned. If you or your representatives wish to discuss this matter, please contact Mr. Harold H. Rubin, Deputy Director (code 129, extension 4515).

Copies of this letter are being sent to the Director of Defense Research and Engineering and the Secretary of the Navy for their information.

Sincerely yours,


Director

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