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REPORT BY THE COMPTROLLER
GENERAL OF THE UNITED STATES

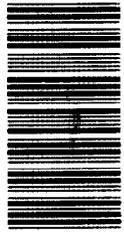
THE LIGHT AIRBORNE MULTI-
PURPOSE SYSTEM, LAMPS MK III,
PROGRESS EVIDENT BUT SOME
PROBLEMS AND QUESTIONS REMAIN

D I G E S T

The newest antisubmarine helicopter weapon system being developed by the Navy is the Light Airborne Multi-Purpose System (LAMPS MK III). It is a computer-integrated ship and helicopter system designed principally for antisubmarine warfare (ASW) with secondary mission capabilities of antiship surveillance and targeting (ASST), search and rescue, medical evacuation, and logistics support. The program is currently in full-scale development. Scheduled for deployment aboard cruisers, destroyers, and frigates, the helicopter designated the SH-60B Seahawk, is a derivative of the Army's UH-60A Black Hawk troop assault helicopter.

The LAMPS MK III is a follow-on to the MK I system first deployed in 1971. The MK I is a limited capability system consisting of an H-2 helicopter equipped with "off-the-shelf" avionics and is based primarily aboard older modified FF-1040 and FF-1052 class warships. The MK I is currently undergoing an avionics improvement program to upgrade its capabilities although not to the level of the LAMPS MK III.

During GAO's review of the LAMPS MK III program, we found potential problems which raise questions about the ability of LAMPS to carry out both its ASW and ASST missions. In addition, the cost of deploying the LAMPS MK III system has grown by 50 percent in the past year from approximately \$3.6 billion to \$5.4 billion. Further, a cost increase of \$1.6 billion was identified in January 1981, raising total program costs to \$7 billion. This represents a cost growth of nearly 100 percent in 16 months.



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ANTISUBMARINE WARFARE MISSION

In its ASW role, the LAMPS MK III helicopter (known as the Seahawk) acts as an extension of shipboard systems by providing a remote platform for deploying sensors, transmitting and processing sensor data, and prosecuting attacks on targeted submarines.

In performing its ASW role, the LAMPS MK III weapon system is dependent on other systems to detect, classify contacts, and prosecute an attack. Therefore, its effectiveness is contingent on the performance of those systems. Some of these systems, such as the new Tactical Towed Array Sonar System, passive sonobuoys, and the MK 46 torpedo, were delayed in development or have known performance limitations. Further, the weight of the advanced lightweight torpedo, being developed to replace the MK 46 torpedo, may be of concern because of its effect on the range and endurance of the LAMPS helicopter. (See p. 5.)

REQUIREMENT COMPROMISED

Studies have shown that the Navy is not planning to buy enough Seahawks to meet projected requirements. An estimate presented to the Chief of Naval Operations Executive Board shows that the Navy may be planning to buy fewer Seahawk helicopters than the minimum required. The Navy feels, however, that buying 204 helicopters is a reasonable compromise based on the funds available. In GAO's opinion, this results in significantly understating the total cost of an effective program. The Navy should determine its MK III helicopter requirements and also alternate means of meeting these requirements if affordability is a serious problem. Otherwise, the Navy may end up with too few helicopters to meet its ASW requirements and no plan to bridge the gap. (See p. 7.)

RELIABILITY AND MAINTAINABILITY CONCERNS

Early flight and equipment testing of the LAMPS MK III helicopter system are proceeding

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well. However, some problems particularly in the area of reliability and maintainability exist which are of developmental concern. Also, data obtained from the Army's Black Hawk program indicates that there may be potential problems in meeting the high-reliability, availability, and maintainability objectives established for the LAMPS MK III system. (See p. 8.)

ANTISHIP SURVEILLANCE AND TARGETING MISSION

The ASST mission of the LAMPS MK III was reduced from a primary to a secondary mission as a cost savings measure in response to congressional direction. The resultant decrease in hardware capabilities reduces LAMPS MK III capability to carry out this mission. LAMPS MK III helicopters suffer from equipment limitations and could be vulnerable when performing the ASST mission. In addition, it is a lower priority platform for over-the-horizon targeting and would probably be too busy performing the ASW mission to perform the ASST mission in time of war. If the Navy is to make effective use of antiship missile systems, such as the Harpoon, it must address the problems and questions relating to the ability of the LAMPS MK III system to successfully carry out this mission. (See p. 11.)

POTENTIAL FOR FUTURE COST INCREASES

From September 1979 to September 1980, LAMPS program costs have increased by 50 percent. If realistic inflation rates were used the increase would be even greater. Further cost increases are likely because of changes in the Army's Black Hawk helicopter procurement plans which would raise the unit cost of the Seahawk.

New data, which became available in January 1981 during preparation of this report, indicates that total program costs will increase by \$1.6 billion. The increases are due to inflation, reductions in the Black Hawk

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program, and additional nonrecurring startup costs for the production phase.

RECOMMENDATIONS

It is essential that the Congress, in its oversight role of Defense, have a clear understanding of the issues, problems, and potential problems that exist. Such is the case with the interrelationship and interdependence of these key weapon systems that are being acquired to carry out the Navy's ASW responsibilities in countering the Soviet threat. Therefore, GAO recommends that the Secretary of Defense address these issues and present a plan to the Congress that will sufficiently identify strengths and weaknesses of the capabilities of the LAMPS and its related systems to satisfactorily perform the ASW mission.

Further, GAO recommends the Secretary of Defense require the Navy to:

- Determine the number of LAMPS MK III helicopters needed to effectively meet its ASW mission requirements.
- Clearly establish the role the LAMPS MK III system is expected to fill in the ASST mission and, if the ASST mission is a major responsibility, identify actions needed to provide the desired capability.
- Reassess the reliability, availability, and maintainability aspects of the LAMPS MK III to determine whether it will be adequate to meet its operational requirements.
- Determine the cost impact of actions resulting from the above recommendations and disclose this information to the Congress.

GAO did not request official comments on this report because of the tight reporting deadline. Instead, a draft of this report was discussed with high level officials associated with management of the program to assure that the report is accurate and complete. Their points of view are included where they differ with GAO's.