
July 5, 2002



Acquisition

Acquisition of the Evolved SEASPARROW Missile (D-2002-126)

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Acronyms

APB	Acquisition Program Baseline
C ⁴ I	Command, Control, Communications, Computers, and Intelligence
ESSM	Evolved SEASPARROW Missile
ORD	Operational Requirements Document



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-4704

July 5, 2002

MEMORANDUM FOR NAVAL INSPECTOR GENERAL

SUBJECT: Report on Acquisition of the Evolved SEASPARROW Missile
(Report No. D-2002-126)

We are providing this report for information and use. We considered management comments on the draft of this report in preparing the final report.

Comments on the draft of this report conformed to the requirements of DoD Directive 7650.3 and left no unresolved issues. Therefore, no additional comments are required.

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. John E. Meling at (703) 604-9091 (DSN 664-9091) (jmeling@dodig.osd.mil) or Mrs. Susan J. Lippolis at (703) 604-9081 (DSN 664-9081) (sjlippolis@dodig.osd.mil). See Appendix D for the report distribution. The team members are listed inside the back cover.


Thomas F. Gimble
Acting
Deputy Assistant Inspector General
for Auditing

Office of the Inspector General of the Department of Defense

Report No. D-2002-126

July 5, 2002

(Project No. D2001AE-0153)

Acquisition of the Evolved SEASPARROW Missile

Executive Summary

Who Should Read This Report and Why? This report should be read by all who are interested in the acquisition of the Navy's Evolved SEASPARROW Missile. This report addresses the need for the Navy to prepare and update key program documentation for the Evolved SEASPARROW Missile that is needed to effectively manage the program before the full-rate production decision.

Background. The Evolved SEASPARROW Missile, a Navy Acquisition Category II program, is an improved version of the RIM-7P SEASPARROW missile that will intercept high-speed maneuvering, anti-ship cruise missiles. This improved version involves the development of a new rocket motor and associated tail control section and modifications of the missile guidance, ordinance, and software. Ten participating governments are cooperatively developing the program that will cost about \$3 billion. The United States' share of the program costs is \$255.3 million for research, development, test, and evaluation and \$1.6 billion for procurement.

Results. Overall, the Evolved SEASPARROW Missile program warrants management attention in the area of program documentation, including the acquisition program baseline agreement, operational requirements document, and the Command, Control, Communications, Computer, and Intelligence Support Plan, before the full-rate production decision. As a result, the Evolved SEASPARROW Missile Program Office does not have all the necessary acquisition documents needed to effectively manage program cost and performance, and acquisition decision makers cannot make fully informed investment decisions. Further, the program office will not be able to accurately report the liability for demilitarization and disposal costs for the missiles in Navy financial statements. (See the Finding section of the report for the detailed recommendations.)

Management Comments. The Deputy Assistant Secretary of the Navy (Planning, Programming and Resources) concurred and was implementing appropriate corrective actions in response to the finding and recommendations. Accordingly, no additional comments are required. We commend the Navy staff on taking appropriate corrective actions.

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Evolved SEASPARROW Missile launched from a self-defense test ship, Fall 2001

Source: North Atlantic Treaty Organization SEASPARROW Program Office

Background

The Evolved SEASPARROW Missile (ESSM) is a medium-range missile intended to provide self-protection for surface ships. The ESSM is an improved version of the RIM-7P SEASPARROW missile that will intercept high-speed maneuvering, anti-ship cruise missiles. The improved version involves the development of a new rocket motor and associated tail control section and modifications of the missile guidance, ordnance, and software. Operationally, the U. S. Navy will deploy the ESSM on both Aegis and non-Aegis class ships. Further, it can be fired from most existing North Atlantic Treaty Organization SEASPARROW surface missile systems.

Ten participating governments are cooperatively developing the program that will cost about \$3 billion. The United States' share of the program costs is \$255.3 million for research, development, test, and evaluation and \$1.6 billion for procurement. The Navy Acquisition Executive is the milestone decision authority for this major system, an Acquisition Category II program. The Navy Acquisition Executive gave approval to the ESSM Program to enter the engineering and manufacturing development phase of the acquisition process and low-rate initial production on November 30, 1994, and on April 6, 2001, respectively. The objective of the low-rate initial production phase is for participating governments to cooperatively produce the ESSM. Appendix B provides more detail on the international consortium developing the ESSM. Appendix C contains definitions of technical terms.

Objectives

The audit objective was to evaluate the overall management of the ESSM Program. Because the program was in the engineering and manufacturing development phase, we determined whether management was cost-effectively developing and readying the system for the full-rate production phase of the acquisition process. In addition, we evaluated the management control program as it related to our audit objective. See Appendix A for a discussion of the audit scope and methodology, the review of the management control program, and prior coverage related to the audit objectives.

ESSM Program Generally Well Managed

Overall, the program office had taken the following necessary actions to develop and ready the program for full-rate production. Specifically,

- The program office established a risk management plan for the ESSM that describes the processes, tools, and responsibilities that each industrial partner, integrated product team, and working group of the ESSM team must follow to evaluate the product and the process risks that affect the program's cost, schedule, and technical success. The risk management plan rates risks in the categories of high, medium, or low. A high rating indicates a risk issue that is likely to seriously disrupt the schedule,

increase cost, or degrade performance, even with special contractor emphasis and close government monitoring. Medium risk issues can potentially disrupt a schedule, increase cost, or degrade performance. Low risk issues have little potential to disrupt schedule, increase cost, or disrupt performance. As of November 2001, 3 issues were rated high risk, 5 were rated medium risk, and 16 were rated as low risk.

- In January 2000, the program office published a Master Acquisition Program Plan containing a comprehensive guide of the ESSM logistics program. The Master Acquisition Program Plan addressed such items as ESSM maintenance and supportability. On March 30, 2001, the Program Executive Officer for Expeditionary Warfare certified the ESSM as logistically ready for low-rate and full-rate production.
- The program office routinely updated the test and evaluation master plan as conditions warranted. The initial plan, approved on January 26, 1995, required extensive ESSM testing using an MK29 launcher on a Spruance-class destroyer. Because of the cost to upgrade the MK29 launchers to support the ESSM and the Navy's decision to decommission the Spruance-class destroyer, the program manager updated the test and evaluation master plan in November 1998 to provide more testing using an MK41 launcher. As of March 2002, in preparation for the full-rate production decision scheduled for February 2003, the ESSM Program Manager was updating the document to show the results of developmental tests.

Further, we determined that the program office had complied with DoD and Navy regulations in the areas of contract management, requirements definition, logistics, and systems engineering. However, one area warrants management attention before the program enters into full-rate production. A discussion of the associated finding follows.

Program Documentation

The ESSM Program Office and the Navy did not update program documents needed to effectively manage the program. Specifically, the program manager did not update the acquisition program baseline agreement to show current acquisition quantities, develop a Command, Control, Communications, Computer, and Intelligence (C⁴I) Support Plan to document required interfaces with other systems, and include missile demilitarization and disposal costs in the life-cycle cost estimate. Those documents were not prepared as required because the program manager:

- was waiting for production cost information from a negotiated production contract to show the decrease in procurement quantities from 4,616 to 2,076 missiles and the increased costs,
- did not believe that the requirement for a C⁴I Support Plan applied to the ESSM Program, and
- did not expect the Navy to have any missiles in the inventory at the end of their 10-year service-life.

Also, the Deputy Chief of Naval Operations (Resources, Warfare, Requirements, and Assessments) (the user) did not update the operational requirements document (ORD) to include interoperability as a key performance parameter because he did not believe it was necessary for the ESSM Program. As a result, the ESSM Program Office did not have all the necessary acquisition requirements to effectively manage program cost and performance, and acquisition decision makers cannot make fully informed investment decisions. Further, the program office will not be able to accurately report the liability for demilitarization and disposal costs for the missiles in Navy financial statements.

Program Documentation Requirements

DoD Policy. DoD Instruction 5000.2, “Operation of the Defense Acquisition System,” January 4, 2001, and DoD Regulation 5000.2-R, “Mandatory Procedures for Major Defense Acquisition (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs,” June 10, 2001, and DoD Manual 5000.4-M, “Department of Defense Cost Analysis Guidance and Procedures,” December 11, 1992, establish policies and procedures for managing acquisition programs. The DoD 5000 documents state that program managers for defense acquisitions are to rely on and generate program documents needed for program execution and decision making. Program documents include the approved program baseline, the C⁴I support plan, the life-cycle cost estimate, and the operational requirements document. These interrelated documents help the program manager provide acquisition decision makers with the information needed to oversee and make important program decisions.

Joint Staff Policy. Chairman of the Joint Chiefs of Staff Instruction 3170.01B, “Requirements Generation System,” April 15, 2001, and Chairman of the Joint Chiefs of Staff Instruction 6212.01B; “Interoperability and Supportability of National Security Systems, and Information Technology Systems,” May 8, 2000, require the program manager to address compatibility, interoperability, and integration key goals for all acquisition programs and to achieve those goals throughout the acquisition life cycle for all acquisition programs. Further, the policy requires the Joint Interoperability Test Command to test and certify all C⁴I systems having joint interoperability requirements before the production milestone decision.

Navy Policy. Secretary of the Navy Instruction 5000.2B, “Implementation of Mandatory Procedures for Major and Non-Major Defense Acquisition Programs and Major and Non-Major Information Technology Acquisition Programs,” December 6, 1996, requires that all Department of the Navy programs implement the requirements of DoD Regulation 5000.2-R. The Assistant Secretary of the Navy (Research, Development, and Acquisition), in a memorandum on “Implementation of Total Ownership Cost (TOC) Baselines in the Department of the Navy,” May 5, 1998, also directed that each Navy acquisition category program revise its current approved acquisition program baseline and establish a total ownership cost objective and threshold as part of a long-term, cost-reduction initiative.

Federal Financial Accounting Standards Guidance. The Statement of Federal Financial Accounting Standards No. 6, “Accounting for Property, Plant, and Equipment,” November 30, 1995, requires that Federal agencies, beginning in FY 1998, recognize a liability in agency financial statements for cleanup costs associated with Federal property, plant, and equipment, including weapons systems, when the agency places the property, plant, and equipment into service. Statement of Federal Financial Accounting Standards No. 6 defines cleanup costs as those costs to remove, contain, or dispose of hazardous waste, or any combination of the three, from material or property that is permanently or temporarily shut down.

Status of Program Documents

Acquisition Program Baseline. DoD Regulation 5000.2-R states that every acquisition program shall establish an acquisition program baseline (APB) beginning at program initiation. The program manager prepares the APB in coordination with the user to document the most important cost, schedule, and performance parameters (both objectives and thresholds) for the program. The program manager bases the APB on user performance requirements, schedule requirements, and an estimate of total program cost. In the event of program restructuring or an unrecoverable program deviation, Regulation 5000.2-R requires the program manager, in coordination with the user, to obtain approval of a revised program baseline.

The Assistant Secretary of the Navy (Research, Development, and Acquisition) approved the initial APB on December 19, 1994. However, the ESSM Program Manager did not update the APB to show the current program quantity and unit

cost requirements as required when the program was restructured. Because of technical difficulties experienced in such areas as the reliability of the control actuator assembly, interface of Aegis combat system software, and the design of the software for the digital auto pilot, the program manager revised, and the Assistant Secretary of the Navy approved, updated APBs on June 22, 1998, May 25, 1999, and June 13, 2000. In the revised APBs, the program manager changed the program schedule but did not adjust program cost data to show increased unit costs and reductions in procurement quantities.

Specifically, the initial and revised APBs showed that the United States planned to purchase 4,616 missiles at a threshold cost of \$1.6 billion. However, the program manager did not reduce the number of missiles to be purchased, beginning with the June 1998 APB. In June 1998, the Assistant Secretary of the Navy approved a revised acquisition strategy indicating that the United States planned to purchase only 2,076 missiles, a decrease of 55 percent, in the planned missile procurement. However, the program office officials did not revise the APB to show that they had reduced the total production cost estimate by 31 percent, from \$1.6 billion to \$1.1 billion. Based on the missile quantity reduction and the revised total production cost estimate, the unit cost per missile increased by 58 percent, from \$344,000 to \$543,000. The program manager stated that missile quantity and unit cost information was not changed in the APB because he was waiting for updated production cost information that would occur when a production contract was negotiated. Further, the program office did not have documentation to show that acquisition decision makers were made aware of the 58-percent increase in unit costs. As a result, decision makers did not have unit cost information available to evaluate whether the ESSM Program remained cost effective and should be continued.

C⁴I Support Plan. DoD Regulation 5000.2-R requires that DoD Components develop C⁴I support plans for programs early in the acquisition process for all acquisition categories when they connect in any way to the communications and information infrastructure. In the C⁴I support plan, DoD Instruction 5000.2 requires each program manager to address system interoperability. The Instruction defines interoperability as the ability of systems, units, or forces to provide data, information, materiel, and services and accept the same from other systems, units, or forces, and to use the data, information, materiel, and services so exchanged to enable them to operate effectively together. The Instruction also states that the outcome of systems acquisition is a system that is interoperable with other systems (United States, coalition, and allied systems, as specified in the operational requirements document). Further, acquisition decision makers are required to review the C⁴I support plan at each milestone and at decision reviews, as appropriate, and whenever support requirements change.

The ESSM Program Manager did not prepare a C⁴I support plan as required and may not have identified all the interoperability and information technology issues affecting the program that should have been addressed through operational testing. The program manager did not believe that the requirement for a C⁴I support plan applied to the ESSM Program because the ESSM did not interface with any other weapon system or communicate with any device other than its host fire control system. This said, the ESSM must be interoperable with the host fire control system. Specifically, the information transmitted from the fire control

system provides midcourse guidance control over the missile. The commands order the missile to accelerate in the crossrange, downrange, or vertical axes, respectively. Also, the ESSM transmits information back to the host fire control system indicating whether it has detected any error in the commands. The program office believed that it would not be cost-effective to prepare a C⁴I support plan because operational test plans were already approved and being used to determine the operational effectiveness of the ESSM; however, the program office should have developed the C⁴I support plan early in the acquisition process to obtain the benefits of preparing the C⁴I support plan.

Life-Cycle Cost Estimates. DoD Regulation 5000.2-R requires that the life-cycle cost estimate be comprehensive and identify all cost elements, including operation and support costs. In addition, DoD Manual 5000.4-M requires that program offices identify the cost of any hazardous, toxic, or radiological materials that may be encountered or generated during system development, manufacture, transportation, storage, operation, and disposal. Furthermore, the guidance states that program offices should include the costs of demilitarization, detoxification, or long-term waste storage in the cost estimates.

Cost Estimate. The life-cycle cost estimate that the program office prepared on November 5, 1994, did not include costs for demilitarization and disposal of the ESSM at the end of its useful life. In the life-cycle cost document, the program office stated that demilitarization and disposal costs would be determined later; however, as of March 2002, the program office still had not estimated those costs. When queried, the program manager stated that demilitarization and disposal costs were not developed because the program office did not expect the Navy to have any missiles in the inventory at the end of their 10-year service life and, accordingly, the program office did not give priority to estimating those costs.

Demilitarization and Disposal Plan. The contractor developed demilitarization and disposal plans for the ESSM Program Office in 2001. The plans outlined procedures for disassembling, demilitarizing, and disposing of various sections of the ESSM. However, the contractor was not required to specify in the plans the costs to demilitarize and dispose of the ESSM at the end of its 10-year service life. As a result, the ESSM Program Office missed an opportunity to identify the estimated costs associated with disassembling, demilitarizing, and disposing of the missile to satisfy life-cycle cost requirements in DoD Manual 5000.4-M.

Navy Financial Statements. Without a life-cycle cost estimate that includes demilitarization and disposal costs, the ESSM Program Office cannot accurately report the liability for the ESSM demilitarization and disposal costs in future Navy financial statements. Although demilitarization and disposal costs may not be a significant percentage of system life-cycle costs, they should not be ignored; those costs for Navy weapon systems may represent a material value on Navy and DoD-wide consolidated financial statements. Those costs are also needed to meet the requirements of Statement of Federal Financial Accounting Standards No. 6.

Operational Requirements Document. DoD Instruction 5000.2 and Chairman of the Joint Chiefs of Staff Instruction 6212.01B mandate that the user establish interoperability as a key performance parameter in all operational requirements documents. The overall objective of this policy decision is to develop, acquire, and deploy national security systems and information technology systems that:

- meet the essential operational needs of U.S. Forces;
- are interoperable with existing and proposed national security systems and information technology systems;
- are supportable over the existing and planned global information grid; and
- are interoperable with the systems of allies and coalition partners.

Also, Joint Requirements Oversight Council Memorandum 132-99, “Policy for Updating Operational Requirements Documents (ORDs) to Incorporate Interoperability Key Performance Parameter (KPP) and Cost,” November 16, 1999, requires that all ORDs supporting a full-rate production decision after March 1, 2001, be updated to include an interoperability key performance parameter.

On November 28, 1994, the Deputy Chief of Naval Operations (Resources, Warfare Requirements, and Assessments) approved the ORD that required the ESSM to be interoperable with all current North Atlantic Treaty Organization SEASPARROW Missile Systems’ fire control systems. To comply with the Joint Requirements Oversight Council Memorandum of November 16, 1999, the Navy needs to update the ORD to designate interoperability as a key performance parameter.

Because the Navy did not update the ORD by March 1, 2001, as required, the Joint Staff’s Director for Command, Control, Communications and Computer Systems (J-6) had not reviewed the ORD and coordinated it with the U.S. Joint Forces Command, the Military Departments, Commanders of the combatant commands, and Defense agencies. Without such coordination, the J-6 had not obtained critical warfighter perspectives on joint operational concepts and joint interface requirements with other systems. The Office of the Deputy Chief of Naval Operations (Resources, Warfare, Requirements, and Assessments) did not update the ORD to include interoperability as a key performance parameter because it believed that the ESSM must be compatible, but not interoperable, with the fire control system.

Conclusion

Documentation is the primary means for providing the milestone decision authority, as well as other key managers, with information needed for decision making. Without accurate and updated program documents, such as the APB, the C⁴I support plan, the life-cycle cost estimate, and the ORD, the program office cannot provide assurance to acquisition decision makers that performance and cost thresholds are being achieved and that the program is affordable. Without

this information, the ESSM Program Office did not have all the necessary acquisition requirements to effectively manage program cost and performance, and acquisition decision makers cannot make fully informed investment decisions.

Recommendations and Management Comments

1. We recommend that the Program Manager for the Evolved SEASPARROW Missile program:

a. Update the acquisition program baseline agreement to show correct acquisition quantities and unit costs.

b. Include a cost element in the missile life-cycle cost estimate to account for demilitarization and disposal costs of the missiles. Those costs should be included in future total ownership cost submissions.

Navy Comments. The Deputy Assistant Secretary of the Navy (Planning, Programming, and Resources) concurred, stating that the acquisition program baseline was modified to include both cost and schedule changes and is being staffed for completion in July 2002. The Deputy Assistant Secretary of the Navy did not indicate the dates when actions to include a cost element in the missile life-cycle cost estimate to account for demilitarization and disposal costs of the missile would be completed.

2. We recommend that the Deputy Chief of Naval Operations (Warfare, Requirements, and Programs) revise the operational requirements document to designate interoperability as a key performance parameter. In designating interoperability as a key performance parameter, a C⁴I support plan would also be required.

Navy Comments. The Deputy Assistant Secretary of the Navy (Planning, Programming, and Resources) concurred, stating that the Deputy Chief of Naval Operations (Warfare, Requirements, and Programs) and the Program Manager began a review of the existing operational requirements document in September 2001 and were currently staffing the revision. The Navy plans to complete the revised operational requirements document by October 30, 2002. The revised operational requirements document will include interoperability as a key performance parameter from which the Program Manager will prepare a C⁴I Support Plan.

Appendix A. Scope and Methodology

Scope

We reviewed documentation dated from April 1992 through March 2002. We used criteria and references cited in DoD Instruction 5000.2, "Operation of the Defense Acquisition System," January 4, 2001, and DoD Regulation 5000.2-R "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Program," June 10, 2001, to perform the audit.

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in the DoD. This report provides coverage of the DoD Weapon Systems Acquisition high-risk area.

Methodology

To accomplish the audit objective, we took the following steps:

- determined whether the user adequately defined the system requirements;
- determined whether the program office developed and effectively implemented an acquisition strategy, an acquisition plan, a risk management plan, a logistics plan, a test and evaluation plan, and a C⁴I support plan;
- evaluated the Defense Contract Management Agency's involvement in monitoring the contractor's earned value management process;
- discussed the content and administration of contract N00024-95-C-5400 with the Defense Contract Management Agency;
- determined whether the program office had prepared a life-cycle cost estimate for the program; and
- reviewed management controls related to the audit objective.

Audit Dates and Standards. We performed this audit from July 2001 through April 2002 in accordance with generally accepted government auditing standards.

Use of Computer-Processed Data. We did not use computer-processed data to perform this audit.

Use of Technical Assistance. We did not use technical assistance to perform this audit.

Contacts During the Audit. We visited or contacted individuals and organizations within the DoD and contractor locations. Further details are available upon request.

Management Control Program Review

DoD Directive 5010.38, “Management Control (MC) Program,” August 26, 1996, and DoD Instruction 5010.40, “Management Control (MC) Program Procedures,” August 28, 1996, require DoD organizations to implement a comprehensive system of management controls that provides reasonable assurance that programs are operating as intended and to evaluate the adequacy of the controls.

Scope of the Review of the Management Control Program. In accordance with DoD Regulation 5000.2-R, June 10, 2001, acquisition managers are to use program cost, schedule, and performance parameters as control objectives to implement the requirements of DoD Directive 5010.38. Accordingly, we limited our review to management controls directly related to those elements of the ESSM program.

Adequacy of Management Controls. We identified a material management control weakness as defined by DoD Instruction 5010.40. Management controls were not adequate for ensuring that the program manager and user updated program management documents as required. Recommendations 1. and 2., if implemented, will ensure adherence to regulatory requirements. We will provide a copy of the report to the senior official responsible for management controls in the Office of the Assistant Secretary of the Navy (Financial Management and Comptroller).

Adequacy of Management Self-Evaluation. ESSM officials identified program documents as part of an assessable unit. However, in its evaluation, ESSM officials did not identify the specific material management control weaknesses identified by the audit. Although the ESSM evaluation addressed the existence of program documents, it did not update the documents in accordance with regulatory requirements.

Prior Coverage

During the past 5 years, the General Accounting Office issued one report addressing the ESSM Program.

Report No. NSIAD-00-149, “Defense Acquisitions: Comprehensive Strategy Needed to Improve Ship Cruise Missile Defense,” July 2000

Appendix B. International Consortium

In 1999, the North Atlantic Treaty Organization SEASPARROW Consortium (Australia, Belgium, Canada, Denmark, Germany, Greece, Italy, Netherlands, Norway, Portugal, Spain, Turkey, and the United States) signed an addendum to the memorandum of understanding for the cooperative support of the North Atlantic Treaty Organization SEASPARROW Surface Missile System concerning the cooperative engineering and manufacturing development of the Evolved SEASPARROW Missile. The engineering and manufacturing development phase of the ESSM Program is sponsored by 10 of the 13 participating governments. For conducting the engineering and manufacturing development phase of the ESSM Program, two classes of participants were established:

- Contributing Participants - Those governments who are sharing in the costs of the engineering and manufacturing development phase of the ESSM Program.
- Non-contributing Participants - Those who are not funding the ESSM engineering and manufacturing development phase (Belgium, Italy, and Portugal).

The participants in the ESSM engineering and manufacturing development phase are to cooperatively design, develop, and test a derivative of the RIM-7P SEASPARROW Missile with improved kinematics and an upgraded ordnance package, and to ensure that the work undertaken will be divided among the participants, to the maximum extent possible, in proportion to their respective financial shares.

Under the work-share agreement, participants are responsible for different components of the ESSM. Each contributing participant will contribute its equitable share of the costs of the ESSM engineering and manufacturing development phase. Development responsibilities of the 10 participating governments follow.

Work Share Summary for ESSM Engineering and Manufacturing Development

<u>Participant</u>	<u>Component</u>	<u>Cost Share Percent</u>
Australia	Thrust vector control and aero surfaces	7.14
Canada	Control section	6.20
Denmark	Fairing, ballast, inertial management unit/electronics/ integration	2.10
Germany	Warhead, digital auto pilot, warhead compatible telemeter	7.84
Greece	Umbilical, digital auto pilot, inertial management unit/electronic/ integration, warhead compatible telemeter	1.95
The Netherlands	Fuselage/power converter	7.56
Norway	Components of the motor	16.40
Spain	All-up-round integration	5.42
Turkey	Warhead replacement flight termination System	1.17
United States	System integration, all-up-round integration, Guidance section, container and equipment, S-Band transceiver, portions of the motor, transition section	<u>44.22</u>
Total		100.00

Appendix C. Definition of Technical Terms

Acquisition Category. An acquisition category is an attribute of an acquisition program that determines the program level of review, decision authority, and applicable procedures. Weapon system acquisition categories consist of I, major defense acquisition programs; II, major systems; and III, all other acquisition programs. Acquisition Category I programs include two subcategories: Acquisition Category ID programs where the milestone decision authority is the Under Secretary Defense for Acquisition, Technology, and Logistics, and Acquisition Category IC programs where the milestone decision authority is the Component Acquisition Executive. The Component Acquisition Executive is the milestone decision authority for all Acquisition Category II programs.

Acquisition Phase. An acquisition phase represents all the tasks and activities needed to bring a program to the next major milestone. Phases provide a logical means of progressively translating broadly stated mission needs into well-defined, system-specific requirements and, ultimately, into operationally effective, suitable, and survivable systems.

Acquisition Program Baseline. An acquisition program baseline is a document that contains the most important cost, schedule, and performance parameters (both objectives and thresholds) for the program. It is approved by the Milestone Decision Authority, and signed by the program manager.

Acquisition Strategy. An acquisition strategy is a business and technical management approach designed to achieve program objectives within the resource constraints imposed. It is the framework for planning, directing, contracting for, and managing a program. It provides a master schedule for research, development, test, production, fielding, modification, postproduction management, and other activities essential for program success. The acquisition strategy is the basis for formulating functional plans and strategies.

Engineering and Manufacturing Development. Engineering and manufacturing development is the third phase of the acquisition process where the program office and its contractors fully develop, engineer, design, fabricate, test, and evaluate the systems and the principal items necessary for support.

Full-Rate Production. Full-rate production is contracting for economic production quantities following stabilization of the system design and validation of the production process.

Information Exchange Requirement. The requirement for information to be passed between and among forces, organizations, or administrative structures concerning ongoing activities.

Key Performance Parameters. Those capabilities or characteristics so significant that failure to meet the threshold can be cause for the concept or system selected to be reevaluated or the program to be reassessed or terminated.

Low-Rate Initial Production. Low-rate initial production is the production of a system in limited quantities to provide articles for additional operational test and evaluation, to establish an initial production base, and to permit an orderly increase in the production rate that will lead to full-rate production after successful completion of operational testing.

Milestone. A milestone is the point when a recommendation is made and approval sought regarding starting or continuing an acquisition program.

Milestone Decision Authority. A milestone decision authority is the individual designated in accordance with criteria established by the Under Secretary of Defense for Acquisition, Technology, and Logistics to approve entry of an acquisition program into the next phase.

Objectives. The performance value that is desired by the user and which the program manager is attempting to obtain.

Threshold. The minimum acceptable value that, in the user's judgment, is necessary to satisfy the need.

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense (Comptroller)/Chief Financial Officer
Deputy Chief Financial Officer
Deputy Comptroller (Program/Budget)

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Assistant Secretary of the Navy (Research, Development, and Acquisition)
Deputy Chief of Naval Operations (Warfare, Requirements, and Programs)
Commander, Naval Sea Systems Command
Program Executive Officer for Expeditionary Warfare
Program Manager, Evolved SEASPARROW Missile
Naval Inspector General
Auditor General, Department of the Navy

Department of the Air Force

Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force

Non-Defense Federal Organization

Office of Management and Budget

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Government Reform
House Subcommittee on Government Efficiency, Financial Management, and Intergovernmental Relations, Committee on Government Reform

**Congressional Committees and Subcommittees, Chairman and
Ranking Minority Member (cont'd)**

House Subcommittee on National Security, Veterans Affairs, and International Relations,
Committee on Government Reform
House Subcommittee on Technology and Procurement Policy, Committee on
Government Reform

Department of the Navy Comments



DEPARTMENT OF THE NAVY
OFFICE OF THE ASSISTANT SECRETARY
RESEARCH, DEVELOPMENT AND ACQUISITION
1000 NAVY PENTAGON
WASHINGTON, DC 20350-1000

24 JUN 2002

MEMORANDUM FOR INSPECTOR GENERAL DEPARTMENT OF DEFENSE

SUBJECT: DRAFT DODIG AUDIT REPORT ON ACQUISITION OF THE EVOLVED
SEASPARROW MISSILE (PROJECT NO. D2001AE-0153)

Reference: Your memo of 15 April 2002

We reviewed your report forwarded by reference. Our comments on
recommendations 1 and 2 are provided in Attachment 1.

for Joseph F. Manning
William J. Schaefer
Deputy Assistant Secretary of the Navy
Planning, Programming and Resources

Attachment:

1. Department of the Navy Comments

CC:
OPNAV (N716)
NAVSEA (00N3)

DEPARTMENT OF THE NAVY (DON) RESPONSE
TO DODIG DRAFT REPORT ON ACQUISITION OF THE EVOLVED SEASPARROW
MISSILE,
PROJECT NO. D2001AE-0153

Recommendation 1, Page 8. We recommend that the Program Manager for the Evolved SEASPAROW Missile program:

- a. Update the acquisition program baseline agreement to show correct acquisition quantities and unit costs.
- b. Include a cost element in the missile life-cycle cost estimate to account for demilitarization and disposal costs of the missiles. Those costs should be included in future total ownership cost submissions.

DON Comments: NAVSEA concurs with the two recommendations in the Draft Report. The APB was modified in August 2001 to include both cost and schedule changes in the program and is being staffed for completion in July.

Recommendation 2, Page 8. We recommend that the Deputy Chief of Naval Operations (Warfare, Requirements, and Programs) revise the operational requirements document to designate interoperability as a key performance parameter. In designating interoperability as a key performance parameter, a C⁴I support plan would also be required.

DON Comments: OPNAV agrees with the DODIG assessment of the need to revise/re-validate the Operational Requirements Document (ORD). Per DOD and SECNAV Instructions 5000.2B series, the ORD must be updated prior to completion of Milestone III and Full Rate Production in the program. ESSM is scheduled to reach Milestone III in February 2003. In light of the Milestone III decision, OPNAV N71 and PMS 471 began a review of the existing 1994 ORD in September 2001 and are currently staffing the revision. The revised ORD will comply with the new format and will include the per unit production cost and C⁴I as Key Performance Parameters as well as a C⁴I Support Plan. The revised ORD is expected to be completed by 30 October 2002.

The DON point of contact for this matter is CDR Mike Smith, N716, (703) 601-4841.

Attachment (1)

Team Members

The Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing of the Department of Defense prepared this report. Personnel of the Office of the Inspector General of the Department of Defense who contributed to the report are listed below.

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