Audit Report

OFFICE OF THE INSPECTOR GENERAL

ACQUISITION OF THE AOE-6 FAST COMBAT SUPPORT SHIP

Report No. 92-030 December 27, 1991

This version of Audit Report No. 92-030 excludes proprietary and For Official Use Only information.

Department of Defense

The following acronyms are used in this report.

CPR.....Cost Performance Report
C/SCSC.....Cost/Schedule Control System Criteria
DCAA.....Defense Contract Audit Agency
DODIG.....Department of Defense Inspector General
GAO.....General Accounting Office
MCCS.....Machinery Centralized Control System
NAPS.....Navy Acquisition Procedures Supplement
NASSCO.....National Steel and Shipbuilding Company
NAVSEA.....Naval Sea Systems Command
OASN (RD&A).....Office of the Assistant Secretary of the Navy (Research, Development and Acquisition)
SUPSHIP.....Supervisor of Shipbuilding, Conversion and Repair

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
400 ARMY NAVY DRIVE
ARLINGTON, VIRGINIA 22202-2884

December 27, 1991

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT)
DIRECTOR, DEFENSE CONTRACT AUDIT AGENCY

SUBJECT: Audit Report on the Acquisition of the AOE-6 Fast Combat Support Ship (Report No. 92-030)

We are providing this final report for your information and use. Comments on a draft of this report were considered in preparing the final report. We made this audit as part of our continuing review of major acquisition programs.

The report recognizes that the Navy was taking adequate actions on numerous issues involving the AOE-6 Program. However, the report also addresses opportunities for the Navy to save $541.3 million and to improve internal controls over the Program.

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Therefore, the Under Secretary of Defense for Acquisition; Assistant Secretary of the Navy (Research, Development and Acquisition); Director, Defense Contract Audit Agency; Naval Sea Systems Command Deputy Commander for Contracts; and Program Manager for the Auxiliary and Special Mission Ship Acquisition Program Office must provide final comments on the unresolved recommendations by February 27, 1992. See the "Status of Recommendations" section at the end of each finding for the unresolved recommendations and specific requirements for your comments.

As required by DoD Directive 7650.3, the comments must indicate concurrence or nonconcurrence in the findings and each recommendation addressed to you. If you concur, describe the corrective actions taken or planned, the completion dates for actions already taken, and the estimated dates for completion of planned actions. If you nonconcur, state your specific reasons for each nonconcurrence. If appropriate, you may propose alternative methods for accomplishing desired improvements.

If you nonconcur with the estimated monetary benefits ($540.1 million in Finding A and $1.2 million on Recommendation C.4. in Finding C) or any part thereof, you must state the amount you nonconcur with and the basis for your nonconcurrence. We did not quantify the monetary benefits related to Recommendation C.2. We ask that you comment on whether there

are monetary benefits associated with Recommendation C.2. and provide an estimate of the amount of the benefits. Recommendations and potential monetary benefits are subject to resolution in accordance with DoD Directive 7650.3 in the event of nonconcurrence or failure to comment. We also ask that your comments indicate concurrence or nonconcurrence with the material internal control weaknesses highlighted in Part I.

The courtesies extended to the audit staff are appreciated. If you have any questions on this audit, please contact Mr. Rayburn H. Stricklin at (703) 614-3965 (DSN 224-3965) or Mr. Robert K. West at (703) 614-1415 (DSN 224-1415). The planned distribution of this report is listed in Appendix F.

Robert J. Lieberman
Assistant Inspector General
for Auditing

Enclosure

cc:
Secretary of the Navy

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o Controls for claims processing on the AOE-6 Program were not adequately implemented. As a result, claims processing may not receive the management oversight needed to ensure appropriate and timely resolution (Finding D).

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Internal Controls. Material internal control weaknesses existed relating to NASSCO's cost and schedule control system (Finding B) and processing of AOE-6 contractor claims (Finding D). Our review of internal controls is discussed in Part I of this report.

Potential Benefits of Audit. The Navy can save about $540.1 million in FY 1992 by deferring the award of the FY 1992 AOE-6 Class ship. The Navy can also save about $1.2 million by not contracting for audit-related services that can be performed by the Defense Contract Audit Agency. Other benefits include more accurate and complete contractor performance reporting and better management oversight of contractor claims. Additional details are included in Appendix D.

Summary of Recommendations. We recommended deferring the planned acquisition of the FY 1992 AOE-6 Class ship and conducting a Defense Acquisition Board program review before the award of any additional ships, reporting more accurate performance data, determining whether the Defense Contract Audit Agency can perform audit-related services before contracting for those services, and adhering to procedures on reporting and documenting contractor claims.

Management Comments. The Office of the Director of Defense Research and Engineering nonconcurred with Recommendation A.1. The Defense Contract Audit Agency conditionally concurred with Recommendation B.2.a., did not express concurrence or nonconcurrence with Recommendation B.2.b., and nonconcurred with Recommendation B.2.c. As of December 19, 1991, the Navy had not provided comments to the draft report, although responses were due by September 30, 1991. We have requested comments from the Office of the Secretary of Defense, the Defense Contract Audit Agency, and the Navy to the final report by February 27, 1992. The complete texts of OSD's and the Defense Contract Audit Agency's comments are in Part IV of this report.

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Office of the Inspector General

AUDIT REPORT NO. 92-030 **December 27, 1991**
(Project No. 9AL-0070)

ACQUISITION OF THE AOE-6 FAST COMBAT SUPPORT SHIP

EXECUTIVE SUMMARY

Introduction. The AOE-6 Class Fast Combat Support Ship's mission is to receive petroleum products, ammunition, and provisions from shuttle ships and to redistribute these items to carrier battle groups. The AOE-6 Program is managed by the Auxiliary and Special Mission Ship Acquisition Program Office of the Naval Sea Systems Command (NAVSEA). In January 1987, the Navy awarded a $290 million fixed-price-incentive contract to the National Steel and Shipbuilding Company (NASSCO) for the detailed design and construction of the first AOE-6 Class ship. The Navy exercised options for a second and third ship in November 1988 and December 1989, respectively. The Navy planned a competition for a fourth and final ship in FY 1992. *

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Objectives. The audit's overall objective was to evaluate the acquisition management of the AOE-6 Program regarding program management elements critical to the early production and deployment phase and associated internal controls.

Audit Results. The Navy was taking sufficient actions on issues related to cost overruns, homeporting of AOE-6 Class ships, provisioning technical documentation, and the contract design process. However, our audit identified other conditions requiring additional management actions.

o The Navy's acquisition requirement for the AOE-6 Program was overstated. This could result in the Navy acquiring an AOE-6 Class ship in FY 1992 for $540.1 million even though the ship will not be needed until after FY 2000 (Finding A).

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* Therefore, there was not an adequate basis for monitoring cost and schedule accomplishments, *

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o NAVSEA had paid over $1 million to a public accounting firm for audit and financial services that the Defense Contract Audit Agency was established to provide (Finding C).

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* Company confidential or proprietary information deleted.

TABLE OF CONTENTS

	Page
TRANSMITTAL MEMORANDUM	1
EXECUTIVE SUMMARY	i
PART I - INTRODUCTION	
Background	1
Objectives	2
Scope	2
Internal Controls	3
Prior Audits and Other Reviews	3
Other Matters of Interest	3
PART II - FINDINGS AND RECOMMENDATIONS	
A. Program Acquisition Requirement	9
B. Cost and Schedule Control System	17
C. Audit-Related Services	33
D. Claims Processing	39
PART III - ADDITIONAL INFORMATION	
Appendix A - Audit Conclusions on Other Matters	47
Appendix B - Prior Audits and Other Reviews	49
Appendix C - Reversing Reduction Gear	53
Appendix D - Summary of Potential Monetary and Other Benefits Resulting from Audit	55
Appendix E - Activities Visited or Contacted	59
Appendix F - Report Distribution	61
PART IV - MANAGEMENT COMMENTS	
Office of the Director of Defense Research and Engineering	65
Defense Contract Audit Agency	67

This report was prepared by the Acquisition Management Directorate, Office of the Assistant Inspector General for Auditing, DoD. Copies of the report can be obtained from the Information Officer, Audit Planning and Technical Support Directorate, (703) 693-0340.

PART I - INTRODUCTION

Background

The mission of the AOE-6 Class Fast Combat Support Ship (the AOE-6 Program) is to receive petroleum products, ammunition, and provisions from shuttle ships and to redistribute those items to ships operating with carrier battle groups in hostile environments. The AOE-6 Program was preceded by four AOE-1 Sacramento Class ships. Those ships were constructed from 1964 to 1970. The AOE-6 Class ships are similar in design to the AOE-1 Class ship, but have a smaller carrying capacity. A major difference between the two classes of ships is that the AOE-6 Class has a gas turbine propulsion system, while the AOE-1 Class has a steam propulsion system.

The Auxiliary and Special Mission Ship Acquisition Program Office of the Naval Sea Systems Command (NAVSEA) manages the acquisition of the AOE-6 Program. The Assistant Chief of Naval Operations (Surface Warfare) is the program sponsor for the AOE-6 Program.

On January 23, 1987, the Navy awarded a $290.1 million competitive, fixed-price-incentive contract for the lead ship, with options for three follow-on ships, to the National Steel and Shipbuilding Company (NASSCO). Construction of the lead ship began in June 1988. The lead ship was originally scheduled for delivery in July 1991; however, as of May 1991, the lead ship was not expected to be delivered until November 1992. The Navy attributed the schedule slip to the late delivery of critical equipment and inefficient contractor production. At the time of the audit, the AOE-6 Program was in the detail design and construction phase of the Naval ship acquisition process.

NAVSEA exercised the option for the first follow-on ship, the AOE-7, in November 1988 and exercised the option for the second follow-on ship, the AOE-8, in December 1989. NAVSEA will not exercise the option for the third follow-on ship, the AOE-9, because OSD rescinded funds for the FY 1991 ship in January 1991.

In December 1990, OSD reduced the AOE-6 Program from a seven to a four ship program. As of April 1991, the total projected procurement funding (Shipbuilding and Conversion, Navy) for the four AOE-6 Class ships was about * , and the total research and development funding was about * . Also, the Navy projected * in Military Construction, Navy, funding for homeporting the AOE-6 Class ships.

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* Company confidential or proprietary information deleted.

Objectives

The overall audit objective was to evaluate the acquisition management of the AOE-6 Program. We made the audit following our critical program management elements approach. Under this approach, the objectives and scope of the audit were tailored to match the status of the AOE-6 Program in the acquisition process. During the survey, we evaluated program requirements, contracting, open items from previous reviews, prime contractor's second sourcing efforts, component breakout actions, testing, acquisition and logistics planning, cost estimating and analysis, and design maturity. At the end of the survey, we determined that additional audit work was not warranted for open items from previous reviews, prime contractor's second sourcing efforts, and testing. The results of our survey of those areas are summarized in Appendix A. Our review of program requirements and contracting resulted in the findings that are presented in Part II of this report. Our review of component breakout actions, acquisition and logistics planning, cost estimating and analysis, and design maturity resulted in the comments in the "Other Matters of Interest" section of this report.

Scope

This performance audit was conducted from September 1989 to May 1991 in accordance with auditing standards issued by the Comptroller General of the United States, as implemented by the Inspector General, DoD, and accordingly included such tests of internal controls as were deemed necessary. We obtained and reviewed data and information, dated from July 1982 through May 1991, to accomplish our objectives in each of the nine program management elements. We interviewed cognizant DoD, Navy, and contractor officials involved in the acquisition and administration of the AOE-6 Program. A list of the activities visited or contacted is in Appendix E. The Technical Assessment Division of the Office of the Assistant Inspector General for Auditing assisted in our review of contracting, testing, acquisition and logistics planning, and cost estimating and analysis.

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Internal Controls

We assessed internal controls relating to the critical program management elements of the AOE-6 Program. In assessing the internal controls, we evaluated internal control techniques such as management plans, written policies and procedures, design reviews, and various mechanisms for independent review of the program. The audit identified material internal control weaknesses, as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38, relating to NASSCO's cost and schedule control system and claims processing. Finding B identified controls that were not in place for monitoring cost and schedule accomplishments for the AOE-6 Program. In addition, Finding D identified controls that were not in place to facilitate management oversight of contractor claims. Recommendations B.1.a., B.1.b., B.2.a., D.1., D.2., and D.3., if implemented, will correct these weaknesses. We have determined that monetary benefits will not be realized by implementing these recommendations. However, implementation of these recommendations will result in more accurate and complete contractor performance reporting and better management oversight of contractor claims. A copy of this final report is being provided to the senior official responsible for internal controls within the Navy.

Prior Audits and Other Reviews

There have been no audits that evaluated the overall management of the AOE-6 Program. In April 1991, the General Accounting Office (GAO) initiated a survey on cost growth in the AOE-6 Program (GAO Code 394429). Also, in September 1991, GAO issued Report No. GAO/NSIAD-91-318BR, "1992 Navy Budget: Potential Reductions in Shipbuilding and Conversion Program," which identified a potential reduction of $523.5 million in the AOE-6 Class Fast Combat Support Ship Program for FY 1992 by delaying, except for procurement of long lead material, construction of the fourth AOE-6 ship until design and construction problems affecting other ships in the Program were resolved. In addition, we identified five other audits that related to our audit objectives. Synopses of those audits are in Appendix B.

Other Matters of Interest

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* On March 15, 1991, the Secretary of the Navy granted authority to increase the contract price by $25 million, without consideration, under Public Law 85-804. Public Law 85-804 provides for granting extraordinary contractual relief when such relief will facilitate the national defense. The Secretary concluded that, without Public Law 85-804 relief, NASSCO's financial condition would not allow it to complete the AOE-6 and AOE-7. The contract modification for the extraordinary relief stipulated that the $25 million increase would be applied to ensure timely launch of the AOE-7, and any leftover amount would be used to continue work on the lead AOE-6 ship. In addition, the modification imposed financial controls on NASSCO relating to payment of dividends, salary increases, and capital expenditures over $100,000. Another modification, issued March 15, 1991, also partially suspended work on the AOE-8 because, at that time, the AOE-8 provided the only identifiable source of funds to settle NASSCO's claims and to complete the AOE-6 and AOE-7.

On April 10, 1991, the President signed Public Law 102-27, which made dire emergency supplemental appropriations for the consequences of Desert Storm and other urgent needs for the fiscal year ended September 30, 1991. The Public Law included $237 million for the AOE-6 Program. The actual flow of these funds to NASSCO will depend on the settlement of the outstanding claims as determined by the Navy. Because the Navy estimated that the additional funding was sufficient to complete the three ships, NAVSEA issued NASSCO a contract modification on May 20, 1991, to restart work on the AOE-8. The modification required that all work accomplished on the AOE-8 between May 20, 1991, and the date of the claims settlement would be limited to modules or subassemblies that could be transported to another shipyard for completion, if necessary.

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NASSCO's bid on the AOE-6 contract was * lower at target price than the next low bid. *

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* On March 19, 1991, we proposed a DoD Federal Acquisition Regulation Supplement change that would require written or oral communications when the successful offeror's proposal is considered to be high risk, either technically or in terms of cost realism.

On April 23, 1991, GAO initiated a survey on the cost growth in the Navy's AOE-6 Program (GAO Code 394429). GAO will coordinate this survey with other GAO reviews of cost growth in the Navy's ship construction programs. GAO has done work over the past several years on cost growth on Navy ship construction contracts. GAO has found that there are many reasons for cost overruns, but that cost overruns often result from low bids for Navy shipbuilding contracts. GAO also found that as cost overruns increased, contract adjustment and claim amounts increased. GAO Report No. GAO/NSIAD-91-18, "Navy Contracting: Ship Construction Contracts Could Cost Billions Over Initial Target Costs," October 1990, and GAO's ongoing reviews of cost growth in shipbuilding programs are summarized in Appendix B.

Based on our review of one shipbuilding program, we are not in a position to make recommendations in this report that might address systemic issues related to cost overruns on shipbuilding programs. GAO's reviews of cost growth on shipbuilding programs would be in a better position to address systemic issues. We do, however, encourage NAVSEA to continue to closely monitor and work with NASSCO to control the cost overruns on the AOE-6 Program.

Contract design effort. In evaluating design maturity during our survey, we found that there had been a large volume of change activity on the AOE-6 contract. Deficient specifications were the reason for many of the contract changes. The AOE-6 specifications were developed by a NAVSEA in-house contract design effort conducted between July 1983 and February 1986. During audit verification, we met with program office and NAVSEA ship design representatives to review the AOE-6 contract design effort.

Two factors contributed to problems with the AOE-6 specifications. One factor was that the AOE-6 machinery centralized control system (MCCS) was directed to be like the DDG-51 MCCS. Because the AOE-6 MCCS design could not be

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completed until the DDG-51 design was completed, the AOE-6 contract design effort was fragmented into two phases. When the DDG-51 design was completed and the AOE-6 MCCS design was revised to reflect the DDG-51 design, the authors involved with other AOE-6 specification sections that interfaced with the MCCS specification section had been reassigned. The result was an inadequate integration of the MCCS with the equipment that it would be monitoring and controlling. The second contributing factor was that budget shortfalls caused interruptions in the Research, Development, Test and Evaluation, Navy, funding needed to maintain and properly complete various specification sections.

Since the completion of the AOE-6 contract design package and the award of the AOE-6 ship construction contract to NASSCO, NAVSEA has made several studies and recommended improvements to the contract design process. For example, in July 1990, NAVSEA issued a report recommending improvements to reading sessions. A reading session is a line by line review of all specification sections to ensure that the specifications are integrated, complete, and correct. Because there were unique problems with the AOE-6 contract design and because NAVSEA has taken action to improve future contract design efforts, we are not making recommendations in this area. However, in the future, we may perform additional audit work relating to ship design specifications.

Homeporting. A major issue facing the Navy relating to the introduction of the AOE-6 Class ships was where to homeport the ships. Based on North Atlantic Treaty Organization commitments and other factors, the Navy had a requirement that AOE-1 Class and AOE-6 Class ships assigned to the East Coast remain fully loaded with ordnance while in homeport. Because of the large size and volatile nature of these ships, special homeporting facilities were required. During the survey, we reviewed documentation that indicated that the Navy's homeport planning efforts for the AOE-6 Class were not timely. We were also concerned whether the Navy's requirement that the ships be ordnance-loaded while in homeport was still valid.

During audit verification, we found that the Navy had established a plan of action and milestones to complete needed homeporting actions. Furthermore, in July 1990, the Navy formed a Flag Level Steering Group to monitor AOE-6 Class homeporting efforts.

In view of the changing political situation in the Soviet Union and Eastern Europe, the Flag Level Steering Group was addressing the need for East Coast AOE-6 Class ships to remain fully ordnance-loaded while in homeport. In August 1990, the Steering

Group tasked the Commander in Chief, U.S. Atlantic Fleet, to review the requirement. The Commander, Naval Surface Force, U.S. Atlantic Fleet, studied the requirement and concluded that it was still valid. In November 1990, the Flag Level Steering Group tasked the Commander In Chief, U.S. Atlantic Fleet, to further review the requirement.

We concluded that, although the Navy's homeport planning efforts started late, homeporting was receiving the needed emphasis at the time of the audit. In addition, the Navy was addressing our concerns on whether the requirement that East Coast AOE-6 Class ships remain ordnance-loaded while in homeport was still valid.

Component breakout. The DoD Federal Acquisition Regulation Supplement requires that program managers conduct and document a component breakout review and evaluation. During the survey, we found that the AOE-6 program office did not conduct a breakout evaluation to determine which components could be broken out and provided as Government-furnished equipment. The program office believed that component breakout would increase the potential for contractor claims.

During audit verification, we reviewed nine major components of the AOE-6 Program to determine the feasibility of breakout. We considered factors such as quality, reliability, design maturity, and timeliness of delivery in making our assessment. We found that by breaking out seven of the nine components reviewed, the Navy could save $3 million for each ship that was procured starting with the fourth ship. In addition, other programs that were using these components could potentially achieve savings. However, the reduction of the AOE-6 ship program from a seven to a four ship program, in December 1990, eliminated significant potential savings from component breakout.

Department of Defense Inspector General (DoDIG) Report No. 91-018, "Component Breakout Program for Major Systems," December 5, 1990, found that the Military Departments were not performing adequate breakout reviews or aggressively pursuing component breakout on major systems. The report also cited NAVSEA for not having a component breakout program. A synopsis of this report is in Appendix B. The recommendations in Report No. 91-018, if implemented, would satisfy most of our concerns on component breakout.

Provisioning technical documentation. During the survey phase of this audit, we found that NASSCO was not submitting provisioning technical documentation in a timely manner, and the quality of provisioning technical documentation was inadequate. The situations existed because NASSCO was not obtaining the

necessary documentation from its vendors and processing the information in a timely manner. Also, the AOE-6 contract only required that NASSCO submit one provisioning technical documentation schedule. It did not require separate submission schedules for items that had been provisioned before (standard items) and items that had not been provisioned before (non-standard items). As a result, *

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* During audit verification, we tracked provisioning technical documentation statistics and met with AOE-6 program office; Supervisor of Shipbuilding, Conversion and Repair (SUPSHIP), San Diego; and NASSCO representatives. We concluded that the program office and SUPSHIP, San Diego, were placing appropriate management emphasis on improving the quality of the provisioning technical documentation, and that some improvement had occurred.

On February 26, 1991, the AOE-6 program manager issued a memorandum to the DoDIG stating that future shipbuilding contracts would require two separate provisioning technical documentation submission schedules for standard and nonstandard items. The program manager also indicated that incentive and penalty clauses for provisioning technical documentation performance will be included in future shipbuilding contracts.

Based on management actions taken and planned, we are not making recommendations in this area, but we encourage the program office and SUPSHIP, San Diego, to continue to closely monitor the provisioning technical documentation situation.

Cost estimating. During our survey, we found that SUPSHIP, San Diego, was not developing realistic cost estimates for AOE-6 contract modifications. The estimates were significantly below the negotiated amount of the modifications. During audit verification, we reviewed contract modifications and met with program office and SUPSHIP, San Diego, representatives to determine if the unrealistic estimates affected the negotiation, contract change authorization, or financial control processes. Based on our evaluation, we concluded that the low estimates did not significantly affect these areas. In addition, we found the estimates had improved.

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* Company confidential or proprietary information deleted.

PART II - FINDINGS AND RECOMMENDATIONS

A. PROGRAM ACQUISITION REQUIREMENT

The Navy's acquisition requirement for the AOE-6 Program was overstated. The requirement was overstated because the Navy did not reduce the number of ships in the AOE-6 Program to correspond with the Secretary of Defense's reduction in the Navy's force structure from 15 to 12 carrier battle groups. Instead of reducing the number of ships in the AOE-6 Program, the Navy decided to prematurely retire other support ships. The overstated requirement, if not corrected, will result in the Navy acquiring an AOE-6 ship in FY 1992, at an estimated cost of $540.1 million, even though that ship will not be needed until after FY 2000.

DISCUSSION OF DETAILS

Background

AOE-6 Class ships are part of the Navy's Combat Logistics Force. Combat Logistics Force ships supply the Navy's combat ships at sea with fuel, provisions, and ammunition. The Combat Logistics Force is comprised of shuttle and station ships. Shuttle ships, which include oilers, ammunition ships, and stores ships, carry only one product. Shuttle ships transfer goods from forward ports, which serve as land-based logistics depots, to station ships. Station ships are multiproduct replenishment ships that carry fuel, provisions, and ammunition to combat ships at sea. Station ships travel with the aircraft carrier battle groups. Fast combat support ships (AOE-1 Class and AOE-6 Class), as well as fleet replenishment oilers (AOR Class), perform station ship roles.

Criteria for Determining Requirements for Station Ships

The AOE-6 Operational Requirement, July 30, 1982, states, "current doctrine establishes a requirement for one multi-product replenishment ship (AOE/AOR) for each carrier battle group (CVBG)." The requirement for one multiproduct station ship for each carrier battle group was established by Chief of Naval Operations Study, "Underway Replenishment Requirements and Forces Study-1988," July 31, 1979. At the time of the audit, the 1979 study, which projected Combat Logistics Force requirements for FY 1988, was the most recent analysis supporting the Navy's requirement for multiproduct station ships. The Study concluded that force logistical readiness for contingencies called for 1 multiproduct station ship for each of the 15 carrier battle groups in the Navy.

In his FY 1987 Annual Report to Congress, the Secretary of Defense reiterated the requirement for one station ship for each carrier battle group. The Secretary stated, "we must add four new station ships to the 11 we now have to support the expanded force of 15 carriers." On March 14, 1991, the Vice Chief of Naval Operations, in a memorandum to the Assistant Secretary of the Navy (Research, Development and Acquisition), also reiterated the requirement for one station ship for every deployable battle group.

Quantitative Acquisition Requirements for AOE Class Ships

The Navy's quantitative requirement for the AOE-6 Program was overstated by three ships. Our audit disclosed that the Navy had 11 station ships, consisting of 7 AOR Class ships and 4 AOE-1 Class ships, and planned to acquire 4 AOE-6 Class ships under the AOE-6 Program. Three of the AOE-6 Class ships were under contract, and the Navy planned to procure the fourth ship in FY 1992. Since the Navy was planning to have only 12 carrier battle groups, 3 of the ships in the AOE-6 Program were not required.

The Navy's quantitative acquisition requirement for the AOE-6 Program was overstated because the Secretary of Defense reduced the Navy's force structure from 15 to 12 carrier battle groups. The Secretary's reduction in the force structure stemmed from a shift in DoD's defense strategy, which centered on countering a global threat posed by the Soviet Union, to a new strategy, which focused on responding to regional threats. The Secretary of Defense indicated, in his January 1991 Annual Report to the President and Congress, that force reductions, which began in FY 1990, would continue during DoD's multiyear defense program. The FY 1992 through FY 1997 defense program reduces aircraft carrier force levels from 15 deployable carriers (16 carriers, including a training carrier) in FY 1990 to a long-term objective of 12 deployable carriers (13 carriers, including a training carrier) in FY 1995.

Another reason the requirement was overstated was that the Navy did not reduce the AOE-6 Program in response to the Secretary's reduction in the force structure. The Navy, in January 1991, decided to retire three AOR Class ships rather than reducing the AOE-6 Program. We considered the Navy's decision to retire AOR ships while planning to procure an additional AOE-6 Class ship inappropriate, because the AOR ships planned for retirement had 11 to 12 years of service life remaining. The Navy indicated that it would retire the three AOR ships from FY 1992 through FY 1994. Originally, the three ships were scheduled to retire after FY 2000.

We believe the Navy decided to retire the AORs early because it considered the AOR Class ships less capable than the AOE Class ships in the station ship role. The Navy cited two primary advantages of the AOE Class ships over the AOR Class ships in this role. First, the AOR has less than one-third of the carrying capacity for ammunition of an AOE and must be coupled with an ammunition shuttle ship in scheduled battle group deployments in the station ship role. The Navy contends that using an ammunition shuttle ship in this manner compounds the shortage of ammunition shuttle carriers. Second, the AOE is a faster ship than the AOR. The top speed of the AOE is 26 knots, whereas the top speed of the AOR is 20 knots. Because the ships in an aircraft carrier battle group can travel at speeds of about 30 knots, the Navy contends that the AORs would slow down the aircraft carrier battle group.

The Navy's concerns about the capability of AOR class ships may not be as significant as before because DoD shifted its defense strategy to focus on a regional as opposed to a global threat. The Navy expressed concern about the shortage of ammunition ships when coupled with AORs, but the Navy was not certain about its requirements for support ships. In a June 1990 memorandum to the Center for Naval Analyses, the Chief of Naval Operations' Director for Program Resource Appraisal stated, "As the force levels for warships and assault ships of the Navy change in the post Cold War period, it is necessary to firmly ground the force level need and the characteristics of future support ships." Also, if only two of the AORs were retired, those ships could still be reactivated in the future, providing additional capacity if needed. On April 2, 1991, we discussed the speed issue with a representative of the Office of the Assistant Secretary of Defense (Program Analysis and Evaluation), Naval Forces Division. The representative indicated that speed was most important during sustained open ocean conflict, which is diminishing with the reduced Soviet threat. Also, the official added that in situations where speed is important, an AOE-1 or AOE-6 Class ship could be used.

The Navy also contended that the AOR was never meant to be used as a station ship. According to the Navy's requirements officer for auxiliaries, the AOR was designed to support the antisubmarine warfare aircraft carriers--a role that did not require that as much ammunition be carried. However, 2 years after the first AOR was delivered, the last antisubmarine warfare aircraft carrier was decommissioned. Further, despite the Navy's contention, AORs have been used in a station ship role for over 20 years. In addition, the Projected Operational Environment and Required Operational Capabilities document for the AOR-1 Class,

issued September 18, 1980, identifies operating "in company with a carrier task force" as one of the projected operational environments for the AOR Class ships.

Effects of Overstated Requirements

At the time of the audit, the Navy planned to recompete the fourth and last AOE-6 Class ship as a stand-alone procurement in FY 1992. The FY 1992/1993 President's Biennial Budget Submission showed $540.1 million budgeted for the FY 1992 ship. Therefore, the overstated requirement, if not corrected, will result in the Navy acquiring an AOE-6 ship in FY 1992 for an estimated $540.1 million even though that ship will not be needed until after FY 2000 when the AOR and AOE-1 Class ships start retiring. It may not be feasible for the Navy to terminate two of the AOE-6 Class ships that are under contract, because the Navy had heavily invested in both ships when the force structure was reduced. As of March 1991, the Navy had invested about * in the AOE-7 (the second AOE-6 Class ship placed under contract) and about * in the AOE-8 (the third AOE-6 Class ship placed under contract). We did not, however, perform a detailed analysis of the feasibility of terminating either of these ships or the extent that work-in-process could be transferred to other programs.

Study on Navy Support Ship Requirements

The Navy has recognized the need to redetermine its requirements for Combat Logistics Force ships. In June 1990, the Office of the Chief of Naval Operations tasked the Center for Naval Analyses to develop a methodology for determining the numbers and mixes of ships required to support a given combatant force level. The Navy stipulated that the methodology consider varying scenarios and levels of activity, force distribution among war theaters, operating conditions of Naval personnel, and evolving technology. The Center for Naval Analyses completed a model for determining support ship requirements in March 1991.

On March 25, 1991, the Chief of Naval Operations tasked the Center for Naval Analyses to apply the model and, using a number of battle force levels and scenarios, to estimate the appropriate number of Combat Logistics Force ships needed. The results of the analysis will be used in a Combat Logistics Force appraisal, which was to be presented to the Chief of Naval Operations in July 1991. According to the Navy's requirements officer for auxiliaries, the appraisal will focus on the Combat Logistics Force structure and address the number of AOEs required to support a given combat force. During this process, the Navy will determine its force level objectives for the FY 1994 Program Objectives Memorandum.

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* Company confidential or proprietary information deleted.

Conclusion

The Navy's initiative to redetermine its requirements for support ships is commendable; however, additional actions are required. Because of the planned decrease from 15 to 12 deployable aircraft carrier groups, the Navy needs to determine whether the requirements for station ships can be satisfied with the existing AOE-1 Class and AOR Class ships and the 3 AOE-6 Class ships under construction. Additional AOE-6 Class ships should not be awarded until an updated analysis that justifies the need for additional ships is completed. In addition, the Navy should assess the affordability of a single ship procurement for a final AOE-6 Class ship in FY 1992. According to Navy representatives, a stand-alone procurement of a ship would be more costly than a multiship procurement. Economic ordering quantity benefits may be realized on a multiship procurement, and savings may be achieved from improved learning being applied to subsequent ships.

By keeping one of the AOR Class ships planned for early retirement and deleting the planned FY 1992 AOE-6 Class ship, the Navy could defer the procurement of additional ships until about FY 2000 and still meet the requirement of one station ship for each carrier battle group. Then, additional ships could be procured through a multiship procurement to coincide with the retirement of the AOR Class and AOE-1 Class ships.

The AOE-6 Program has been plagued with cost and schedule problems, and those problems are other reasons why we believe the Navy should defer the award of the FY 1992 ship. The AOE-6 Class Defense Acquisition Executive Summary report, issued March 25, 1991, showed "R" assessment ratings, which indicate major problems, for cost and schedule performance.

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Schedule. The AOE-6 Program has also experienced substantial schedule slippages. As of May 1991, the lead AOE-6 ship was projected to be delivered in November 1992, 16 months later than the contracted delivery date of July 1991. The Navy attributed the schedule slippages to late delivery of critical equipment and inefficient contractor production. For example, the late delivery of the reversing reduction gears directly

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* Company confidential or proprietary information deleted.

contributed to slippages in the lead ship delivery date and resulted in the ship being launched without the gears in October 1990. In addition, the March 1991 Defense Acquisition Executive Summary report noted a potential for further impact on the ship's delivery schedule if significant problems were encountered during factory testing of the reversing reduction gears and if NASSCO's production efficiencies did not improve. The reversing reduction gear issue is further discussed in Appendix C.

Because of the questionable need for additional ships and the cost and schedule problems on the AOE-6 Program, OSD should review the AOE-6 Program before any additional ships are procured.

RECOMMENDATIONS, MANAGEMENT COMMENTS, AND AUDIT RESPONSE

1. We recommend that the Under Secretary of Defense for Acquisition have the Defense Acquisition Board conduct a program review of the AOE-6 Program before the award of any additional AOE-6 Class ships. The program review should focus on the need for additional ships, the AOE-6's cost and schedule problems, and the additional cost of a single ship procurement.

OSD comments. The Deputy Director (Tactical Warfare Programs), Office of the Director of Defense Research and Engineering, responded on behalf of the Under Secretary of Defense for Acquisition. The Deputy Director nonconcurred with Recommendation A.1. and stated that the Under Secretary of Defense for Acquisition had been closely following the situation with the AOE-6 Class ships. The Deputy Director stated that the Under Secretary had directed the Navy to recompete the last AOE-6 Class ship in FY 1992 as a result of a program review of the AOE-6 Class Program last spring. In further support of the need for the last AOE-6 ship, the Deputy Director stated that current practice requires that each AOR be mated with an ammunition shuttle ship (AE) in order to meet the support requirement for a Carrier Battle Group. The Deputy Director added that the AOR and AE combination is a highly inefficient operation when one AOE can perform the mission. A complete text of the Deputy Director's comments is in Part IV of the report.

Audit response. The program review that the Deputy Director referred to in his comments was a DAES meeting that occurred in May 1991. At that meeting, OSD tasked the Navy to expand on the Center for Naval Analyses' requirements study in order to readdress the total buy of the AOE-6 Class ships. The Navy was to respond to OSD by October 15, 1991. As of October 31, 1991, the Navy had not responded. OSD's tasking

to "readdress the total buy" implies that it questioned the validity of the requirement. We believe that the requirement for an additional AOE-6 Class ship in FY 1992 needs further evaluation based on the issues raised in our finding. Furthermore, in response to the Deputy Director's comments about the inefficiency of the AOR and AE combination, we question the efficiency of deactivating AOR ships before the end of their useful lives. We ask that the Under Secretary of Defense for Acquisition provide additional comments to the recommendation in response to the final report. The response should cover the areas specified in the "Status of Recommendations" section at the end of the finding.

2. We recommend that the Assistant Secretary of the Navy (Research, Development and Acquisition):

a. Suspend the award of the FY 1992 AOE-6 Class ship until the Navy completes its requirements analysis for support ships. If the requirement is valid, defer the award of the ship until a multiship procurement is necessary to replace the retiring AOR and AOE-1 Class ships.

b. Defer the retirement of one of the three AOR Class ships planned for early retirement in the FY 1992 through FY 1994 time frame until the end of the ship's expected service life.

Department of the Navy comments. As of December 19, 1991, we had not received a response from the Navy on Recommendations A.2.a. and A.2.b. However, in an attempt to obtain the Navy's position on the recommendations, we contacted the AOE-6 requirements officer on October 24, 1991, about the status of the Combat Logistics Force appraisal, which is discussed on page 12 of this report. On October 30, 1991, the requirements officer stated that a Combat Logistics Force "informational" briefing was given to the Chief of Naval Operations on August 5, 1991. The requirements officer also provided the following statement.

> One AOE per carrier battle group is the requirement. Today, there are 12 carrier battle groups so the requirement is 12 AOEs. Revised carrier battle group force levels will be determined during the FY 1994 Program Objectives Memorandum process. If the number of carrier battle groups changes, the required number of AOEs will be changed accordingly.

Audit response. The requirements officer's statement was not in sufficient detail to determine the Navy's planned position. His statement expressed uncertainty about the number of carrier battle groups that will be in the Navy and did not address the disposition of AORs. As such, we ask that the Assistant Secretary of the Navy (Research, Development and Acquisition) respond to Recommendations A.2.a. and A.2.b. The response should cover the areas specified in the "Status of Recommendations" section at the end of the finding.

STATUS OF RECOMMENDATIONS

		Response Should Cover:			
Number	Addressee	Concur/ Nonconcur	Proposed Action	Completion Date	Related Issues*
1.	Under Secretary of Defense for Acquisition	X	X	X	M
2.a.	Assistant Secretary of the Navy (Research, Development and Acquisition)	X	X	X	M
2.b.	Assistant Secretary of the Navy (Research, Development and Acquisition)	X	X	X	M

* M = monetary benefits

B. COST AND SCHEDULE CONTROL SYSTEM

NASSCO's cost and schedule control system did not comply with DoD policy. The situation existed because the Navy improperly accepted NASSCO's cost and schedule control system in 1979 under a prior contract, the Navy did not conduct the required preaward actions, NASSCO did not provide full disclosure of estimates at completion for the AOE-6 Class ships that were under construction and had not acted to correct timekeeping deficiencies identified by the Defense Contract Audit Agency (DCAA), and DCAA did not focus its reviews on areas essential to providing early disclosure of cost growth conditions and their impact. As a result, the contractor's system did not provide an adequate basis for responsible decisionmaking and monitoring cost and schedule accomplishments. Furthermore, inaccurate data resulted in NASSCO receiving * too much in progress payments. *

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DISCUSSION OF DETAILS

Background

The detailed design and construction contract for the AOE-6 Program required that NASSCO have a cost and schedule control system that satisfied the requirements of DoD Instruction 7000.2, "Performance Measurement for Selected Acquisitions," June 10, 1977. DoD Instruction 7000.2 requires the use of Cost/Schedule Control System Criteria (C/SCSC) in selected contracts within major system acquisitions. The Instruction was canceled and included in part 11, section B, of DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991.

The objective of C/SCSC is to provide an adequate basis for responsible decisionmaking by contractors and DoD managers. According to the C/SCSC, a contractor's cost and schedule control system should identify budgeted cost for work scheduled, budgeted cost for work performed, and actual cost of work performed at the cost account level on a monthly basis. A contractor's system must indicate work progress; relate cost, schedule, and technical accomplishment; and supply DoD managers with information at a practicable level of detail. In addition, the contractor's system must provide valid, timely, and auditable data.

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* Company confidential or proprietary information deleted.

The C/SCSC Joint Implementation Guide, October 1, 1980,[1/] provides uniform guidance for the Military Departments and other Defense agencies responsible for implementing the C/SCSC consistent with DoD Instruction 7000.2.

The AOE-6 contract also required that the contractor prepare cost performance reports (CPRs) monthly. DoD Instruction 7000.10, "Contract Cost Performance, Funds Status and Cost/Schedule Status Reports," December 3, 1979, which was canceled by and included in part 20 of DoD 5000.2-M, "Defense Acquisition Management Documentation and Reports," February 23, 1991, required CPRs for contracts that require compliance with DoD Instruction 7000.2.

Compliance with C/SCSC

NASSCO's cost and schedule control system did not comply with DoD criteria for such systems. We found that the system did not provide for performance measurement of material and did not ensure that accurate labor costs were reported. Also, the system did not provide accurate estimates at completion for the AOE-6 Class ships that were under construction.

Performance measurement for material. DoD Instruction 7000.2 requires that a contractor's cost and schedule control system establish and maintain a timephased budget against which contractor performance can be measured. A formal timephased scheduling system must provide the means for determining the status of specific activities and milestones.

NASSCO's system did not meet the requirements for timephasing of material. Consequently, the system did not provide adequate performance measurement for material.

Labor costs. The accuracy of data in the system is essential for the contractor's cost and schedule control system to produce meaningful and useful performance measurement data.

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1/ The Joint Implementation Guide was revised on October 1, 1987; however, the October 1, 1980, version is applicable to the AOE-6 Class contract.

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* but are normally a problem with shipyards in general. DoDIG Audit Policy and Oversight Report No. APO 91-006, "Report on the Oversight Review of the Defense Contract Audit Agency Audits of Timekeeping and Labor Accounting Systems at Shipbuilding Contractors," February 12, 1991, determined that DCAA had identified the same timekeeping internal control deficiencies at six locations, * (Appendix B).

Estimate at completion. C/SCSC requires that the contractor develop comprehensive estimates at completion using all available information to determine the best possible estimates at completion. The estimate at completion is comprised of the actual direct and indirect costs incurred plus the estimate of costs for the remaining authorized work. The contractor's estimates at completion, if closely monitored and evaluated, should enable program managers to identify areas in which the contractor is experiencing cost growth and overruns.

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* We noted that estimates at completion on CPRs differed from the estimates at completion that NASSCO informally submitted to the Navy. In May and September 1990, NASSCO submitted, outside of the formal reporting process, position papers to NAVSEA discussing performance problems on the AOE-6 contract. The papers included revised production hour estimates. The May 1990 NASSCO position paper showed production hour estimates at completion of * * and * for the AOE-6, AOE-7, and AOE-8 ships, respectively.

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* for the AOE-6, AOE-7, and AOE-8 ships, respectively. *

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In January 1991, NAVSEA and NASSCO negotiated production hour estimates at completion. However, the CPRs did not show the estimate at completion projections that NASSCO informally submitted to the Navy or the negotiated estimates at completion. *

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In addition, the CPRs stated that the estimate at completion hours were presented in accordance with an October 22, 1990, NAVSEA letter.

The October 22, 1990, letter responded to *
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* NAVSEA denied the request stating that the final settlement of the reversing reduction gear provisional payment and other NASSCO claims and requests for equitable adjustments would cause the ship contract prices, labor estimates at completion, and schedules to be modified. The Navy also determined that adjusting the estimates at completion would negatively affect progress payments and cash flow.

We believe that reprogramming is a separate issue from depicting a realistic estimate at completion in the CPR. The estimate at completion is developed by the contractor and should reflect expected business conditions as understood by the Government and contractor. According to the Joint Implementation Guide, reprogramming allows the contractor to increase the budget amount for the remaining work to a more realistic amount. A CPR should show a budget at completion and an estimate at completion along with any reprogramming adjustments. Also, suspending estimate at completion adjustments for progress payment purposes can be done while still presenting an accurate estimate at completion in the CPR.

In addition, *
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* This estimate at completion is further refined based on the best judgment of analysts and detailed action plans. However, *
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* which was for the period February 26 through April 12, 1989. As of April 12, 1989, the ship was approximately * complete * complete based on production hours only). The CPRs did improve for the AOE-7 and AOE-8. The estimate at completion was adjusted on CPR 11 for the AOE-7 and on CPR 10 for the AOE-8 at which time the ships were * and * percent complete, respectively.

During a July 1990 review of NASSCO's cost and schedule control system, *

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The review concluded that the contractor had two operating estimate at completion systems, and that the Government was exposed to only one estimate at completion through the CPR. The second system was developed by the cost account managers, and this information was submitted to upper management through internal reports at management meetings. According to NASSCO, there were not two different systems. Instead, the second system described was a result of periodic overall reviews. This review process was one of the bases for forecasting the estimates at completion reflected in the May and September 1990 position papers.

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Original validation. On January 30, 1979, the Chief of Naval Material accepted NASSCO's management system as satisfying the C/SCSC requirement in DoD Instruction 7000.2. Navy personnel conducted a series of reviews of NASSCO's cost and schedule control system after awarding NASSCO a contract for two destroyer tender ships in December 1975. In August 1978, the review team concluded that NASSCO's cost and schedule control system was in compliance with DoD Instruction 7000.2 and recommended acceptance of its system. There were no conditions or qualifying remarks pertaining to the validation.

NASSCO's system was accepted * * , as required by DoD Instruction 7000.2. An August 1978 Navy review report on NASSCO's system specifically stated that * , NASSCO's CPR for material was adequate for project management. In addition, NASSCO's September 1978 system description for material, which was revised in November and December 1978, specifically stated, "time-phased budgets for material are not required per agreement with the Navy." This agreement was not documented and was not mentioned in the January 1979 acceptance letter.

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* Company confidential or proprietary information deleted.

According to OSD and Navy personnel, the Navy did not support C/SCSC. As a result, superficial reviews were conducted, and noncompliant management systems were accepted. The NASSCO cost and schedule control system was one example of this condition.

Preaward actions. DoD Instruction 7000.2 states that when C/SCSC is included as a requirement in a request for proposals, an evaluation review will be performed as an integral part of the source selection process. On June 10, 1986, the Navy issued a request for proposals for the AOE-6 Program, which contained the clause requiring implementation of C/SCSC. In response, NASSCO submitted its proposal stating that it would use the cost and schedule control system previously approved in accordance with DoD Instruction 7000.2. A contractor proposing the use of a previously accepted management control system may satisfy the requirement by citing in the proposal a memorandum of understanding regarding its system. A memorandum of understanding normally makes the need for further review during source selection unnecessary. In this case, the contractor cited the notification of acceptance dated January 30, 1979, and reiterated its compliance with the criteria. We found no evidence of a memorandum of understanding. Therefore, an evaluation review was required and should have been done as described in the Joint Implementation Guide.

The Joint Implementation Guide states that the evaluation review for a contractor proposing to use a previously accepted system can be accomplished by the responsible contract administration office and resident auditor furnishing a report stating whether the contractor's system still meets the criteria and if not, identifying specific deficiencies. The report should be provided to the Source Selection Evaluation Board. According to Navy personnel, this was not done. *

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DCAA reviews. DCAA did not perform essential audit requirements in reviewing NASSCO's cost and schedule control system. DCAA's Contract Audit Manual states that DCAA should

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* Company confidential or proprietary information deleted.

review a contractor's cost and schedule control system at least once a year. It also states that certain aspects of the system, such as estimates at completion, should be reviewed as frequently as necessary to ensure reliance on the system and its output. Because the basic objective of a performance measurement system is to provide early disclosure of existing or potential cost growth conditions, particular emphasis should be placed on areas of control such as variance analyses and estimates at completion. We did not find evidence that DCAA made these reviews.

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For example, in February 1990, SUPSHIP, San Diego, prepared a material status report that showed *
* This was not reflected in the CPR. In addition, recent discussion papers on AOE-6 program issues stated that *

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An inaccurate CPR loses validity and significance. The CPR is not intended to be a real time report or to provide the first indication of a problem with a contractor's plant. Rather, it is intended to enable the program manager to show the cost impact of known problems, reveal unknown or future problems, outline any trends, provide a basis for a detailed analysis of financial health of the contract, and verify the accuracy of informal information. Also, CPRs can be used to assess the validity of progress payments. Although the CPR is only one method of performance measurement available, it is the vehicle that should indicate the overall cost impact of problems identified through other methods. In addition, CPRs provide input to other reports, such as the Defense Acquisition Executive Summary, and top level reports to Congress, such as the Selected Acquisition Report. The Defense Acquisition Executive Summary and Selected Acquisition Report are only as accurate as the CPR input. While project level managers have access to supplemental information, top level managers must rely soley on the Defense Acquisition Executive Summary and Selected Acquisition Report information as a basis for program decisions.

Progress payments. As a result of inaccurate estimates at completion, the Navy had paid NASSCO * too much in progress payments as of January 1991. Secretary of the Navy Instruction 7810.12B, "Shipbuilding Progress Payments," September 16, 1986, provides Navy procedures for progress payments based on a percentage of completion. The Instruction states that these procedures will ensure that payments are commensurate with the work that has been accomplished. However, NASSCO was provided progress payments that were not commensurate with the work that had been accomplished.

In October 1990, NAVSEA temporarily suspended any estimate at completion adjustments because of their impact on progress payments. The revised estimates at completion would have reduced the ship's physical progress earned to date, which in turn would have reduced the progress payments earned to date. The Navy "froze" the estimates at completion regarding billings in order to minimize future negative cash flow. Furthermore, in March 1991, the Navy decided to defer recoupment of the overprogressing because it would cause a cash flow deterioration that NASSCO could not absorb.

NASSCO determined the * overpayment by applying the estimates at completion negotiated between NASSCO and NAVSEA in January 1991 to progress payments that had been made. According to a discussion with SUPSHIP, San Diego, personnel, the overpayment was not verified. In addition, the Navy continued to

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make progress payments based on the "frozen" estimates at completion rather than the newly negotiated estimates at completion. Therefore, progress payments made after the date used to determine the * amount were also larger than they would have been with the negotiated estimates at completion, resulting in an even larger overpayment.

The DoDIG "Report on the Oversight Review of the Defense Contract Audit Agency Audits of Timekeeping and Labor Accounting Systems at Shipbuilding Contractors," also discusses progress payment reviews. The Report states that Secretary of the Navy Instruction 7810.12B requires that DCAA audit contractors to ensure that contractors are not being overprogressed. However, the Instruction is unclear as to whether the DCAA audit should be of specific progress payments or the system itself. At the time of our audit, DCAA's audit manual did not address progress payments based on percentage of completion; however, DCAA was revising its audit manual to include this method of payment.

Although audits of progress payments are generally made at the administrative contracting officer's request, DCAA can initiate an audit whenever it believes an audit is necessary to protect the Government's interests. DCAA has reviewed specific NASSCO progress payments at the administrative contracting officer's request. However, DCAA has not evaluated NASSCO's methodology for determining progress payments or the impact of estimates at completion on progress payments. In January 1991, DCAA attempted to initiate a review that would have evaluated estimates at completion and their impact on progress payments. Based on our discussions with DCAA, we found that DCAA did not receive adequate support from the Navy to conduct the review. Also, we believe that DCAA was not timely in initiating such a review. As a result, overprogressing was not detected as early as possible. We believe that DCAA should evaluate NASSCO's method of determing progress payments and the effect that estimates at completion have on progress payments.

NASSCO's claim. In January 1990, NASSCO submitted a * claim as a result of Navy requested changes to its cost and schedule control system. NASSCO contended that it was entitled to a contract adjustment because its existing system had been previously validated, and NASSCO's proposal stated that it intended to use the existing system. Furthermore, since NASSCO's system was validated, NASSCO contended that it did not make any substantive changes to its system--only enhancements to reflect a change in construction methods. In addition, the Navy awarded the contract to NASSCO with knowledge of NASSCO's intention and imposed additional cost and schedule control system requirements after award of the contract.

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* Company confidential or proprietary information deleted.

The required preaward action for an evaluation review, if conducted by the Navy, would have shown that the original validation was improper, and that the existing system was not compliant with DoD Instruction 7000.2. This could have prevented the * claim filed by NASSCO for the required changes to its system.

Actions Taken by Management

In June 1987, the Navy visited NASSCO to review cost and schedule control system implementation and informally advised NASSCO that its system was not compliant with C/SCSC. At that time, SUPSHIP, San Diego, recommended that a complete demonstration review, rather than a subsequent application review, be conducted, contending that NASSCO's cost and schedule control system was not the same as that previously accepted under the contract for the destroyer tender ships. The major change cited was the change from a summary work breakdown structure, as defined in Military Standard 881A, "Work Breakdown Structures for Defense Material Items," April 25, 1975, using a systems approach of major elements to an organization and commodity cost grouping.

The Joint Implementation Guide states that when a contractor has a previously accepted system, a subsequent application review should be conducted in conjunction with a newly awarded contract that has a C/SCSC requirement. This review is normally conducted within 90 days after contract award to determine whether the contractor has properly applied the previously accepted management control system to the new contract. The review is limited in scope and length because its purpose is to minimize unnecessary repetition of work previously performed in the demonstration review. A subsequent application review will be performed instead of a full demonstration review if the contract administration office confirms that the accepted system has been or is being operated as agreed to in the earlier contract.

On May 11, 1988, the Navy provided NASSCO a list of discrepancies with its cost and schedule control system. The discrepancies were the result of an in-depth review of NASSCO's system description based on the Joint Implementation Guide criteria. This was the first time that the Navy documented the lack of timephasing of material.

On August 19, 1988, SUPSHIP, San Diego, recommended that NASSCO's validation be withdrawn as an incentive to NASSCO to bring its management system into compliance with the C/SCSC. This was never done. NASSCO and the Navy continued to exchange correspondence and hold meetings. On October 26, 1989, NASSCO submitted a revised system description.

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* Company confidential or proprietary information deleted.

In July 1990, the Navy reviewed NASSCO's system. The review determined discrepancies such as no timephasing or performance reporting for material, inadequate timekeeping policies and procedures, and internal estimates at completion that did not agree with those reported to the Government.

At the time of our audit, the Navy planned to conduct another review of NASSCO's cost and schedule control system in October 1991.

RECOMMENDATIONS, MANAGEMENT COMMENTS, AND AUDIT RESPONSE

1. We recommend that the Program Manager for the Auxiliary and Special Mission Ship Acquisition Program Office require that:

a. The National Steel and Shipbuilding Company implement a cost and schedule control system that complies with DoD criteria.

b. The National Steel and Shipbuilding Company report its best estimates at completion in cost performance reports.

Department of the Navy comments. As of December 19, 1991, we had not received comments from the Navy on Recommendations B.1.a. and B.1.b.

Audit response. We ask that the Program Manager for the Auxiliary and Special Mission Ship Acquisition Program Office provide comments to the final report. The comments should cover the areas specified in the "Status of Recommendations" section at the end of the finding.

2. We recommend that the Director, Defense Contract Audit Agency:

a. Periodically evaluate variance analyses, system integrity, data reconciliations, and estimates at completion related to the National Steel and Shipbuilding Company's cost and schedule control system to ensure continued reliance on the system and related output.

Defense Contract Audit Agency comments. The Assistant Director, Policy and Plans, concurred with Recommendation B.2.a., but stated that it would perform the required surveillance reviews after a properly validated system exists at NASSCO. The Assistant Director disagreed with our conclusion that DCAA did not perform essential audit requirements in reviewing NASSCO's cost and schedule control system. The Assistant Director stated that DCAA had initiated a financial capability review in

July 1988 and participated in the May 1988 and July 1990 NAVSEA reviews of NASSCO's cost and schedule control system. In addition, the Assistant Director stated that surveillance reviews were never performed because of the significant deficiencies disclosed in the May 1988 and July 1990 NAVSEA reviews. He contended that, because the contractor had not yet implemented the required corrective action, it would be an inappropriate and imprudent allocation of audit resources to initiate surveillance effort to ensure reliance on the system and its output. The Assistant Director stated that the report is unclear as to what additional audit steps DCAA should have performed that would have disclosed the extent of the overrun being shown in the NASSCO position papers. The full text of the Assistant Director's comments is in Part IV of the report.

Audit response. We disagree with the Assistant Director's position that DCAA will perform the required reviews only after a properly validated system exists at NASSCO. We recognize the difficulties inherent in surveilling a cost and schedule control system that has significant deficiencies; however, in such situations, we believe that DCAA should still perform constructive audit work to determine the reliability of the CPR data. We believe that the validity of the contractor's estimate at completion and the impact of estimates at completion on progress payments should be emphasized. In reviewing estimates at completion, DCAA should obtain technical assistance from SUPSHIP, as necessary. In addition, DCAA should reconcile data in the CPR to contractor internal management reports to ensure that the information reported in the CPR is accurate. The DCAA Contract Audit Manual requires evaluations of estimates at completion and data reconciliations. Therefore, we have revised Recommendation B.2.a. to include data reconciliations.

DoD and the contractor must rely on a contractor's cost and schedule control system for data with which to make management decisions. By having a contractor's system meet the cost and schedule control system criteria, DoD obtains assurance that the contractor's internal management systems are sound and that the data can be relied on. Government auditing standards generally require that when internal controls are weak or ineffective, more extensive audit tests and evaluations are needed. Therefore, we do not believe that an improperly validated cost and schedule control system or an inadequate system description precludes the performance of surveillance reviews, which would evaluate the validity of the data being reported. Rather, we believe that it becomes even more imperative that aspects of the

system be evaluated and that certain reviews would reinforce the effect of the deficiencies.

We request that the Director, DCAA, provide comments to revised Recommendation B.2.a. in response to the final report. The response should cover the areas specified in the "Status of Recommendations" section at the end of the finding.

b. Evaluate the National Steel and Shipbuilding Company's method of determining progress payment amounts and determine the impact of estimates at completion on the progress payment amounts.

Defense Contract Audit Agency comments. The Assistant Director did not express concurrence or nonconcurrence with Recommendation B.2.b. In commenting on the recommendation, he stated that required reviews would be integrated with the cost and schedule control system output after a properly validated system exists at NASSCO.

Audit response. The Assistant Director's comments to Recommendation B.2.b. may indicate a misunderstanding of the intent of the recommendation, which was for DCAA to evaluate NASSCO's policies and procedures for calculating progress payments and the impact of estimates at completion on progress payments. We recognize that DCAA has reviewed specific NASSCO progress payments at the administrative contracting officer's request. However, DCAA had not evaluated NASSCO's policies and procedures for calculating progress payments or the impact of estimates at completion on progress payments. For clarity, we revised the recommendation from wording that required DCAA to verify NASSCO's method of determining progress payment amounts to the wording shown in this report.

In August 1991, the Assistant Secretary of the Navy (Research, Development and Acquisition) completed a review of the Navy's progress payment procedures. As a result of that review, the Assistant Secretary directed that NAVSEA require that SUPSHIPs request semiannual DCAA audits of shipbuilding contractor's progress payment development procedures. The Assistant Secretary's actions should ensure that the intent of our recommendation is met. Therefore, no further comments are required on Recommendation B.2.b.

c. Update and verify the overprogressed amount on the AOE-6 contract resulting from inaccurate estimates at completion.

Defense Contract Audit Agency comments. The Assistant Director nonconcurred with Recommendation B.2.c. The Assistant Director stated that the overprogressed amount did not appear to consider the outstanding equitable adjustment claims and was based on financial data not available to DCAA. However, the Assistant Director stated that DCAA could review the overprogressed amount with SUPSHIP technical assistance after settlement of the outstanding claims and adjustment of the CPR baselines. The Assistant Director also stated that DCAA would perform independent reviews when a properly validated cost and schedule control system existed at NASSCO.

Audit response. Although the Assistant Director nonconcurred with Recommendation B.2.c., the planned actions he cited were partially responsive to the intent of the recommendation. In January 1991, NASSCO determined that it had been overprogressed by * based on estimates at completion that had been agreed to by NASSCO and NAVSEA. The intent of the recommendation was for DCAA to make an independent verification of the overprogressed amount. If a settlement on the outstanding equitable adjustment claims has not been made when this report is issued, we still believe that an independent evaluation of the potential overprogressed amount needs to be made to determine the amount the Government may potentially have overpaid the contractor and be at risk for. On October 23, 1991, the contracting officer stated that a settlement was expected on the outstanding claims in November 1991. After settlement of the outstanding claims, DCAA should conduct another independent evaluation to determine whether any overprogressing has occurred, and this evaluation should reflect the impact of the claims settlement. We request that the Director, Defense Contract Audit Agency, provide comments to Recommendation B.2.c. in response to the final report. The response should cover the areas specified in the "Status of Recommendations" section at the end of the finding.

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* Company confidential or proprietary information deleted.

STATUS OF RECOMMENDATIONS

Number	Addressee	Response Should Cover: Concur/ Nonconcur	Proposed Action	Completion Date	Related Issues*
1.a.	Program Manager for the Auxiliary and Special Mission Ship Acquisition Program Office	X	X	X	IC
1.b.	Program Manager for the Auxiliary and Special Mission Ship Acquisition Program Office	X	X	X	IC
2.a.	Director, Defense Contract Audit Agency	X	X	X	IC
2.b.	Director, Defense Contract Audit Agency				
2.c.	Director, Defense Contract Audit Agency	X	X	X	

* IC = material internal control weakness

C. AUDIT-RELATED SERVICES

The NAVSEA Shipbuilding Contracts Division was contracting with a public accounting firm for financial and audit services that should have been done by DCAA. The situation existed because the Navy did not coordinate with DCAA before contracting for those services to determine whether DCAA could have performed the work. As of April 1991, NAVSEA had paid the public accounting firm about $300,000 for financial and audit services related to the AOE-6 Program, which DCAA contended it could have performed. Furthermore, since FY 1986, NAVSEA had paid over $1 million for financial and audit services on various programs, including the AOE-6.

DISCUSSION OF DETAILS

Background

DoD Directive 5105.36, "Defense Contract Audit Agency," June 8, 1978, states that DCAA was established to perform all contract auditing for DoD. The Directive also states that DCAA will provide accounting and financial advisory services on contracts and subcontracts to all DoD Components responsible for procurement and contract administration. These services will be provided in connection with negotiation, administration, and settlement of contracts and subcontracts. DCAA is a separate agency of DoD under the direction, authority, and control of the Comptroller of the Department of Defense.

DoD Directive 7600.9, "Contracting for Audit Services," May 8, 1985, required that DoD Component heads ensure that requests for contracts for non-Federal auditors were coordinated with, and approved by, the responsible DoD audit organization before issuing a solicitation package. DoD Directive 7600.9 was in effect when the contract was awarded, but was canceled when DoD Directive 7600.2, "Audit Policies," February 2, 1991, was issued. DoD Directive 7600.2 requires that DoD Components not contract for audit services unless the expertise required to perform the audit is not available within the DoD audit organization, or temporary audit assistance is required to meet audit reporting requirements mandated by law or DoD regulation.

Contracting for Audit-Related Services

On February 23, 1989, the NAVSEA Shipbuilding Contracts Division awarded contract N00024-89-C-2021 to KPMG Peat Marwick, a public accounting firm, for financial and audit services supporting

various shipbuilding programs. In FYs 1990 and 1991, the Navy exercised options under the contract for continued "specialized financial audit and analysis services" initiated under the basic contract. KPMG Peat Marwick had provided similar services to NAVSEA under contract N00024-86-C-2248 awarded in September 1986.

NAVSEA awarded contract N00024-89-C-2021 and its options on a sole source basis. The justification and approval for noncompetitively awarding the FY 1991 option stated:

> . . . this follow-on contract must be awarded to Peat Marwick . . . as it possesses highly specialized knowledge of the financial aspects of Navy shipbuilding contracts, shipbuilders and shipbuilding-related manufacturers. . . . To select another company to perform this effort will result in significant delay and disruption to complex, ongoing, multi-million dollar Navy shipbuilding procurements. . . . This unacceptable delay and disruption would be caused by the new accounting firm's lack of experience with unique shipbuilding laws, terms and conditions as well as a lack of knowledge of past events and the intent and bases of previous actions taken. . . .

NAVSEA did not coordinate with DCAA before awarding contract N00024-89-C-2021 to determine whether DCAA could have performed the services. The NAVSEA Shipbuilding Contracts Division justified contracting with KPMG Peat Marwick for financial and audit services by contending that KPMG Peat Marwick had specialized experience with financially troubled shipyards. The contracting official responsible for the requirement stated that KPMG Peat Marwick was able to provide a quality product within the time constraints that NAVSEA required. The contracting official viewed DCAA as conducting "routine audits" that were less difficult than the work KPMG Peat Marwick performed. NAVSEA provided no evidence that showed problems with the timeliness or quality of DCAA's work.

Contracting for Audit-Related Services in Support of the AOE-6 Program

In FY 1989, under contract N00024-89-C-2021, KPMG Peat Marwick performed a financial analysis of the proposed sale of NASSCO by Morrison Knudsen and assessed the impact of the sale on NASSCO's ability to complete the AOE-6 contract. Since that time, KPMG Peat Marwick has continued to perform financial analyses of NASSCO for NAVSEA. The AOE-6 contracting officer contended that KPMG Peat Marwick was in a better position to perform follow-up analyses on NASSCO than DCAA because of KPMG Peat Marwick's

review of NASSCO before the sale. KPMG Peat Marwick issued two formal financial analysis reports on NASSCO, dated May and December 1989.

DCAA contended that it had the expertise and resources to conduct the financial and audit services that KPMG Peat Marwick performed for NAVSEA on the AOE-6 Program. The DCAA branch manager responsible for NASSCO reviewed the two formal KPMG Peat Marwick reports and indicated that DCAA could have performed the work. DCAA has a resident office at NASSCO. The DCAA Contract Audit Manual states that a resident office enables auditors to develop a comprehensive understanding of the contractor's operations and basic management policies and practices in relation to Government contracting. The DCAA Manual further states that this understanding enables more efficient audits of major contractors and more timely and effective audit advice on these contractors to procurement and contract administration activities.

In December 1990, DCAA attempted to initiate a financial capability review of NASSCO because the AOE-6 contracting officer indicated that NASSCO was * However, the AOE-6 contracting officer opposed DCAA's review and issued a memorandum to DCAA on January 28, 1991, which stated that the Navy was already aware of NASSCO's financial position and preferred that DCAA's resources be devoted to audits of other topics. The DCAA branch manager decided not to perform the review.

Effects of Contracting for Audit-Related Services

NAVSEA paid KPMG Peat Marwick over $1 million for financial and audit services between September 1986 and April 1991. NAVSEA paid $910,000 under contract N00024-89-C-2021 and $150,000 under contract N00024-86-C-2248. About $300,000 of the $910,000 was for services on the AOE-6 Program. By the end of FY 1991, NAVSEA may pay an additional $160,000 on contract N00024-89-C-2021. If NAVSEA continues to contract for financial and audit services as it has in the past, it could expend another $1.2 million over the next 6 years.

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* Company confidential or proprietary information deleted.

RECOMMENDATIONS, MANAGEMENT COMMENTS, AND AUDIT RESPONSE

We recommend that the Deputy Commander for Contracts, Naval Sea Systems Command:

1. Request the Defense Contract Audit Agency to determine whether it can perform the services contracted with KPMG Peat Marwick under contract N00024-89-C-2021.

2. Terminate, if economical, any services on contract N00024-89-C-2021 that the Defense Contract Audit Agency states that it can provide.

3. Coordinate with the Defense Contract Audit Agency to determine whether it can provide necessary audit-related services before contracting for these services in the future.

4. Prohibit award of contracts for services for which coordination with the Defense Contract Audit Agency discloses that the Defense Contract Audit Agency can provide the services.

Department of the Navy comments. As of December 19, 1991, the Navy had not responded to Recommendations C.1., C.2., C.3., and C.4.

Audit response. We request that the Deputy Commander for Contracts, Naval Sea Systems Command, provide comments on Recommendations C.1., C.2., C.3., and C.4. in response to this final report. The response should cover the areas specified in the "Status of Recommendations" section at the end of the finding.

Defense Contract Audit Agency comments. Although Recommendation C.1. was not addressed to DCAA, the Assistant Director, Policy and Plans, stated that the Branch Manager had, on numerous occasions, advised NAVSEA that DCAA could provide the services. The full text of the Assistant Director's comments is in Part IV of this report.

STATUS OF RECOMMENDATIONS

		Response Should Cover:			
Number	Addressee	Concur/ Nonconcur	Proposed Action	Completion Date	Related Issues*
1.	Deputy Commander for Contracts, NAVSEA	X	X	X	M
2.	Deputy Commander for Contracts, NAVSEA	X	X	X	M
3.	Deputy Commander for Contracts, NAVSEA	X	X	X	M
4.	Deputy Commander for Contracts, NAVSEA	X	X	X	M

* M = monetary benefit

D. CLAIMS PROCESSING

Internal controls for monitoring claims processing on the AOE-6 Program were not adequately implemented. The situation existed because NAVSEA did not fully comply with reporting and documentation procedures. As a result, claims may not receive the oversight needed to ensure appropriate and timely processing and resolution. In addition, similar claims may recur because lessons learned were not documented. Last, the Navy made a $29.3 million provisional payment on a claim without documenting the claim's technical assessment and the contracting officer's determination that the amount the contractor was entitled to be paid was reasonable.

DISCUSSION OF DETAILS

Background

A claim is a written demand by one of the contracting parties seeking, as a matter of right, the payment of money, adjustment or interpretation of contract terms, or other relief arising under or related to the contract.

Between October 1988 and May 1991, NASSCO submitted * claims totaling about * on the AOE-6 Program. As of May 1991, NAVSEA had settled only six claims, totaling about $5.3 million. NAVSEA planned to settle the remaining claims by September 1991.

The Contract Management Division at NAVSEA had overall responsibility for claims settlement at NAVSEA and was responsible for reporting the status of claims to higher authority. Evaluating a claim requires coordination and expertise from various disciplines, such as legal, technical, and accounting. NAVSEA or the responsible field activity establishes a claim settlement team with a claims team manager to process and evaluate a claim.

The Navy Acquisition Procedures Supplement (NAPS) and NAVSEA Contracting Manual provide guidance on processing claims. The guidance sets forth reporting and documentation requirements, which function as internal control procedures for monitoring the claims process. The guidance also requires that reports be prepared documenting lessons learned from claim analyses and suggested actions to avoid recurrence of similar claims. In addition, the guidance specifies the review and documentation required for provisional payments on claims.

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* Company confidential or proprietary information deleted.

Provisional payments. NAVSEA did not prepare required documentation before making a $29.3 million provisional payment against a NASSCO claim in October 1990. NAPS, paragraph 33.9001(d)(5), requires that the following documents be prepared before making provisional payments against contractor claims.

o A legal determination that the contractor is entitled to the compensation.

o Sufficient technical, administrative, and audit analyses supporting a legal determination.

o A contracting officer's determination on the amount the contractor is entitled to and whether the amount of ultimate entitlement will be equal to or will exceed the amount of the provisional payment.

NAVSEA did not document the technical assessment and the contracting officer's determination before making the $29.3 million payment. The Assistant AOE-6 Project Manager's technical assessment and the contracting officer's determination were verbal. The contracting officer's determination was documented on March 7, 1991, after we identified the deficiency. NAVSEA's counsel prepared a legal determination before the provisional payment was made.

In April 1991, NAVSEA made a second provisional payment of $45 million. NAVSEA obtained the required documentation before making the payment.

Effect of Noncompliance

Because NAVSEA did not fully comply with reporting and documentation procedures, claims may not receive the oversight needed to ensure appropriate and timely resolution. Claims reports would facilitate the OASN (RD&A) oversight of the AOE-6 claims situation. Contractor claims deserve oversight because claims may involve complex, legal, factual, and financial issues and a significant expenditure of resources. Delays in resolving contractor claims can seriously affect the relationship between the Government and the contractor and also affect the contractor's financial condition. Because of the magnitude of claims on the AOE-6 Program and the poor financial condition of the shipbuilder, oversight of claims processing and resolution are particularly important. Also, similar claims may recur because lessons learned were not documented. Lessons learned reports are important in attempting to prevent or lessen the impact of similar claims in the future. In addition, the Navy made a $29.3 million provisional payment on a claim without

documenting the claim's technical assessment and the reasonableness of the amount the contractor was entitled to be paid.

RECOMMENDATIONS, MANAGEMENT COMMENTS, AND AUDIT RESPONSE

We recommend that the Deputy Commander for Contracts, Naval Sea Systems Command, issue a memorandum requiring that:

1. The Contract Management Division provide initial claims reports, quarterly claims reports, a summary of quarterly claims reports, and final claims reports on AOE-6 contractor claims over $1 million to the Office of the Assistant Secretary of the Navy (Research, Development and Acquisition), as required by the Navy Acquisition Procedures Supplement.

2. Claims team managers for AOE-6 claims submit lessons learned reports to the Contract Management Division, as required by the Naval Sea Systems Command Contracting Manual.

3. Documentation requirements established in the Navy Acquisition Procedures Supplement be adhered to on any future provisional payments made against AOE-6 contractor claims.

Department of the Navy comments. As of December 19, 1991, the Navy had not responded to Recommendations D.1., D.2., and D.3.

Audit response. We request that the Deputy Commander for Contracts, Naval Sea Systems Command, provide comments on Recommendations D.1., D.2., and D.3. in response to this final report. The response should cover the areas specified in the "Status of Recommendations" section at the end of the finding.

STATUS OF RECOMMENDATIONS

		Response Should Cover:			
Number	Addressee	Concur/ Nonconcur	Proposed Action	Completion Date	Related Issues*
1.	Deputy Commander for Contracts, NAVSEA	X	X	X	IC
2.	Deputy Commander for Contracts, NAVSEA	X	X	X	IC
3.	Deputy Commander for Contracts, NAVSEA	X	X	X	IC

* IC = material internal control weakness

PART III - ADDITIONAL INFORMATION

Appendix A - Audit Conclusions

Appendix B - Prior Audits and Other Reviews

Appendix C - Reversing Reduction Gear

Appendix D - Summary of Potential Monetary and Other Benefits Resulting From Audit

Appendix E - Activities Visited or Contracted

Appendix F - Report Distribution

APPENDIX A: AUDIT CONCLUSIONS ON OTHER MATTERS

We did not identify any significant problems during our review of the critical program management elements of open items from previous reviews, prime contractor's second sourcing efforts, and testing. A discussion of our conclusions in these areas follows.

Items from previous reviews. We reviewed documentation on program reviews, design reviews, and logistics audits. We found that these reviews were being performed, as required by Navy guidance. We concluded that adequate actions were being taken to track and follow up on open issues.

Prime contractor's second sourcing efforts. Our objective was to determine the extent of competition at the subcontract level. Based on our review of a sample of NASSCO's purchase orders, we concluded that adequate price competition existed at the subcontract level.

Testing. During the survey, we reviewed the status of the AOE-6 Class testing program and the shipbuilder's detailed test plan. The Navy had completed model testing for the AOE-6 design, but detailed testing of the individual components and subsystems had not started because of the early stage of construction that the lead ship was in. At the end of our survey in February 1990, we concluded that the testing program management element did not warrant additional audit coverage. During audit verification, we learned that design and manufacturing problems had delayed the delivery of the reversing reduction gears, which affected the AOE-6 Program's ship delivery dates. *

*

* As of May 31, 1991, factory testing of the gears was underway and had identified no major problems. The program office indicated that the gears will be thoroughly tested, before delivery of the lead ship, during builder's trials (ship trials conducted by the contractor) and acceptance trials (ship trials conducted by the Naval Board of Inspection and Survey), which were scheduled for July 1992 and September 1992, respectively.

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* Company confidential or proprietary information deleted.

APPENDIX B: PRIOR AUDITS AND OTHER REVIEWS

GAO Report No. GAO/NSIAD-91-318BR (OSD Case No. 8862), "1992 Navy Budget: Potential Reductions in Shipbuilding and Conversion Program," September 1991. The objectives of the GAO audit were to review the Navy's shipbuilding and conversion budget account for FY 1992 for selected ship programs to determine whether the funding levels requested were justified and examine selected aspects of the current and prior year budgets to determine whether unused funds could be reduced. GAO identified a potential reduction of $523.5 million in the AOE-6 Program for FY 1992 by delaying, except for procurement of long lead material, construction of the fourth AOE-6 ship until design and construction problems affecting other ships in the Program were resolved. The report stated that continuing problems with the delivery of the reversing reduction gears and other problems associated with constructing the first three ships had increased the cost estimates of those ships and created considerable risk that the fourth ship would not be completed as scheduled if fully funded in FY 1992. The report made no formal recommendations.

GAO Report No. GAO/NSIAD-91-18 (OSD Case No. 8327), "Navy Contracting: Ship Construction Contracts Could Cost Billions Over Initial Target Costs," October 1990. The objective of the GAO audit was to update the status of potential cost growth on Navy ship construction contracts. In performing the audit, GAO reviewed the Navy's 62 fixed-price shipbuilding and conversion contracts, including the AOE-6 contract. GAO found that, as of the beginning of FY 1990, the estimated cost of these contracts had increased $5.5 billion over the initial target cost. GAO attributed the cost growth to low initial prices due to intense competition for Navy contracts, problems with ship designs and with late Government-furnished equipment, changes to original contracts, unrealized gains in productivity as a class of ships moves through construction, and contract claim adjustments. The report made no recommendations.

GAO Review (GAO Code 394419) "Cost Growth in Navy Ship Construction." GAO initiated this review in January 1991. The review objectives were to update information from previous GAO reports on potential costs of shipbuilding contracts, determine if current budget procedures and resources can adequately fund all potential liabilities, and evaluate the capability of shipyards to absorb their share of potential cost growth. GAO planned to complete the review in December 1991.

GAO Review (GAO Code 394429) "Cost Growth in the Navy's AOE-6 Ship Program," was initiated in April 1991. The review was directed by language in the conference report on the FY 1991 Dire Emergency Supplemental Appropriations Bill. GAO was reviewing the cost growth in the Navy's AOE-6 Program and planned to monitor the Navy's procedures for processing NASSCO claims and settlements. GAO was coordinating this review with GAO Code 394419 and our audit. GAO anticipated completing the review in December 1991.

DoDIG Report No. 91-018, "Report on the Audit of the Component Breakout Program for Major Systems," December 5, 1990. The audit objective was to evaluate the adequacy of component breakout efforts on major systems. The audit found that the Services frequently were not performing adequate component breakout reviews or aggressively pursuing component breakout on major systems. The report cited NAVSEA for not having a component breakout program, not issuing guidance on component breakout, and not having established internal controls to ensure program managers complied with the guidance in the DoD Federal Acquisition Regulation Supplement on component breakout. The report recommended that the Under Secretary of Defense for Acquisition include in the revision of DoD Directive 5000.1 a requirement for program managers to perform and document component breakout reviews as part of their system acquisition strategy; the Under Secretary of Defense for Acquisition and the Comptroller of the Department of Defense evaluate the feasibility of establishing monetary goals for breakout savings and cost avoidances; and the Service Acquisition Executives direct program executive officers and program managers to comply with the component breakout requirements in the DoD Federal Acquisition Regulation Supplement and direct program managers to complete component breakout reviews as a required step in acquisition strategies. As of October 31, 1991, the report's recommendations were being implemented. In an October 23, 1991, memorandum to the DoDIG Deputy Assistant Inspector General for Inspections, GAO and Audit Follow-up, the Director, Acquisition Policy and Program Integration, stated that the component breakout requirement that existed in DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," February 23, 1991, would be clarified and that the proposed language would be staffed with the Deputy Assistant Inspector General before updating the Instruction, which was planned for spring 1992. The Director also stated that OSD was implementing the component breakout analysis requirement contained in DoD Instruction 5000.2. In addition, the Director stated that the Under Secretary of Defense

for Acquisition had agreed to update the DoD Federal Acquisition Regulation Supplement to include a requirement for analysis of the trade-off between savings available through component breakout and the increased risk to the Government of assuring responsibility for Government-furnished equipment items.

DoDIG Audit Policy and Oversight Report No. APO 91-006, "Report on the Audit Policy and Oversight Review of the Defense Contract Audit Agency Audits of Timekeeping and Labor Accounting Systems at Shipbuilding Contractors," February 12, 1991. The review objectives were to determine if DCAA was adequately reviewing timekeeping and labor accounting systems and whether deficiencies identified were being corrected. The review determined that DCAA had identified the same timekeeping internal control deficiencies at six shipyards, * The report recommended that DCAA pursue the correction of the timekeeping system deficiencies, at all shipyards, with both the contractor and the Navy, and that DoD revise the DoD Federal Acquisition Regulation Supplement to specify the requirement for internal controls over timekeeping. DCAA and DoD agreed with the recommendations. The review also found that the Navy was hesitant to address the timekeeping issues, partially because of the lack of the administrative contracting officer's authority to withhold progress payments on shipbuilding contracts because of accounting or internal control weaknesses. The Navy agreed to modify its progress payment clause to provide this authority. Because shipbuilding contracts require that progress payments be based on "physical" progress, the Navy did not agree with the report's recommendation that DCAA should examine how the contractor computes progress payment amounts. The review found, however, that the amounts are based substantially on accounting data, rather than an estimate of physical progress, which would require audit. The recommendation was resolved in August 1991 when the ASN (RD&A) directed that NAVSEA require that SUPSHIPs request DCAA semiannual audits of shipbuilding contractor's progress payment development procedures.

DoDIG Project No. 1AE-5006, "Audit of the Effectiveness of the DoD Use of Contractor Cost and Schedule Control System Data on Major Weapons Systems." The audit was initiated in November 1990. The audit objective was to evaluate the effectiveness of the implementation and oversight of cost and schedule control systems and the use of data reported by contractors complying with C/SCSC. We coordinated the results of our evaluation of NASSCO's cost and schedule control system with this audit. The audit will be completed in November 1991.

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* Company confidential or proprietary information deleted.

APPENDIX C: REVERSING REDUCTION GEAR

The reversing reduction gear is a key component of the AOE-6 Class ship's main propulsion system. The AOE-6 will be the first large U.S. Navy surface ship with a reduction gear that incorporates a reversible converter coupling. The reversible converter coupling enables the gears to provide reverse propulsion.

Late delivery of the reversing reduction gears has adversely affected the AOE-6 Program ship delivery schedules. As of May 1991, the reversing reduction gear for the first ship was expected to be delivered to NASSCO 29 months late, and the first ship was projected to be delivered to the Navy 16 months late. The delayed delivery date for the ship was not due solely to the late delivery of the reversing reduction gear. Our audit did not include an evaluation of the reversing reduction gear issue, but according to the Navy, the delay in delivery was due to a variety of design and manufacturing problems. The Navy indicated that NASSCO and the Navy share responsibility for the late delivery of the gears. The Navy contended that NASSCO's inadequate surveillance of the gear vendor, Cincinnati Gear Company, and the poor performance of Cincinnati Gear contributed to problems with the gears. The Navy also determined that the AOE-6 Class ship delivery dates caused NASSCO to set unrealistic delivery dates for the reversing reduction gears--* years instead of the typical * years to develop large, first-of-class type gears. In addition, the Navy represented the gear design as a production model, when components of the design had not been finalized. The developmental nature of the reversible converter coupling was a large part of the design problem. After award of the AOE-6 contract, the manufacturer of the reversible converter coupling revised the drawings numerous times.

NASSCO filed a claim for additional engineering and production costs incurred as a result of the late receipt of the reversing reduction gears. In addition, NASSCO had submitted claims for inefficiencies due to a larger work force, lost opportunities for learning, and interruption of advanced shipbuilding technology, which NASSCO alleges were affected by the late delivery of the gears. In May 1991, the reversing reduction gear and related claims totaled about * The Navy had made two provisional payments totaling $74.3 million on claims relating to the gears.

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* Company confidential or proprietary information deleted.

In August 1990, the Navy converted the reversing reduction gear from contractor-furnished equipment to Government-furnished equipment to mitigate further delays and to address Cincinnati Gear's financial problems. In addition, the AOE-6 Program Manager established a management team at Cincinnati Gear to assist with resolving problems. As of May 1991, the reversing reduction gear was being factory tested and was scheduled to be delivered to NASSCO in August 1991.

APPENDIX D: SUMMARY OF POTENTIAL MONETARY AND OTHER BENEFITS RESULTING FROM AUDIT

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
A.1.	Economy and Efficiency. Will provide OSD oversight to ensure the Navy is using resources effectively and economically.	Included in A.2.a. below.
A.2.a.	Economy and Efficiency. Will determine whether resources should be expended for an additional ship and defer procurement of the ship until a more economical buy can be made.	Funds Put to Better Use. The Navy could save $540.1 million over the Future Years Defense Program (FY 1992 - FY 1996 Shipbuilding and Conversion, Navy, funds).
A.2.b.	Economy and Efficiency. Will ensure requirements for station ships will be met without acquiring an additional AOE-6 Class ship until about FY 2000.	Included in A.2.a. above.
B.1.a.	Internal Control. Will provide more realistic performance data to managers.	Nonmonetary.
B.1.b.	Internal Control. Will provide more realistic performance data to managers.	Nonmonetary.
B.2.a.	Internal Control. Will ensure accurate cost and schedule reporting.	Nonmonetary.
B.2.b.	Economy and Efficiency. Will validate NASSCO's method for determining progress payment amounts.	Nonmonetary.

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
B.2.c.	Ecomomy and Efficiency. Will verify the amount that the contractor has been over-progressed on the AOE-6 contract.	Undeterminable monetary benefit.1/
C.1.	Economy and Efficiency. Will avoid expending resources for services that a Government agency was established to provide.	Included in C.2. below.
C.2.	Economy and Efficiency. Will avoid expending resources for services that a Government agency was established to provide.	Undeterminable monetary benefit.2/
C.3.	Economy and Efficiency. Will avoid expending resources for services that a Government agency was established to provide.	Included in C.4. below.
C.4.	Economy and Efficiency. Will avoid expending resources for services that a Government agency was established to provide.	Funds Put to Better Use. The Navy could save about $1.2 million over the Future Years Defense Program. (FY 1992 - FY 1996 Shipbuilding and Conversion, Navy, and Operations and Maintenance, Navy, funds)

1/ A monetary benefit may result if DCAA's review of the overprogressed amount finds that the contractor has been overprogressed by more than * and if the Navy decides to recoup interest on the overprogressing.

2/ A monetary benefit will result if it is economically feasible to terminate the existing contract with KPMG Peat Marwick for financial and audit services.

* Company confidential or proprietary information deleted.

APPENDIX D: SUMMARY OF POTENTIAL MONETARY AND OTHER BENEFITS RESULTING FROM AUDIT (cont'd)

Recommendation Reference	Description of Benefit	Amount and/or Type of Benefit
D.1.	Compliance with Regulations. Will enable acquisition decisionmakers to monitor processing and settlement of contractors' claims.	Nonmonetary.
D.2.	Economy and Efficiency. Will avoid recurrence of similar claims and expedite processing of future claims.	Nonmonetary.
D.3.	Compliance with Regulations. Will ensure an adequate basis exists to make provisional payments on contractors' claims.	Nonmonetary.

APPENDIX E: ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Washington, DC
Assistant Secretary of Defense (Program Analysis and Evaluation), Washington, DC
Comptroller of the Department of Defense, Washington, DC
Director, Operational Test and Evaluation, Washington, DC

Department of the Navy

Assistant Secretary of the Navy (Research, Development and Acquisition), Washington, DC
Assistant Chief of Naval Operations (Surface Warfare), Washington, DC
Commander, Operational Test and Evaluation Force, Norfolk, VA
Naval Sea Systems Command Headquarters, Washington, DC
Supervisor of Shipbuilding, Conversion and Repair, San Diego, CA
Naval Investigative Service, Washington, DC
Naval Facilities Engineering Command, Alexandria, VA
Navy Ships Parts Control Center, Mechanicsburg, PA

Defense Agencies

Defense Contract Audit Agency, San Diego, CA
Defense Plant Representative Office, General Electric, Evendale, OH
Defense Contract Management Area Operations Plant Representative Office, General Electric, Daytona Beach, FL
Defense Contract Management Area Operations Office, Peoria, IL
Defense Contract Management Area Operations Office, Hartford, CT

Contractors

National Steel and Shipbuilding Company, San Diego, CA
Caterpillar, Peoria, IL
Combustion Engineering, Inc., Windsor, CT
General Electric, Simulation and Controls Systems Division, Daytona Beach, FL
General Electric, Aircraft Engines Division, Evendale, OH
Lakeshore, Inc., Iron Mountain, MI

APPENDIX F: REPORT DISTRIBUTION

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition
Assistant Secretary of Defense (Program Analysis and Evaluation)
Comptroller of the Department of Defense

Department of the Navy

Secretary of the Navy
Assistant Secretary of the Navy (Financial Management)
Assistant Secretary of the Navy (Research, Development and Acquisition)
Chief of Naval Operations
Assistant Chief of Naval Operations (Surface Warfare)
Auditor General, Naval Audit Service
Commander, Naval Sea Systems Command
Auxiliary and Special Mission Ship Program Office, Naval Sea Systems Command
Supervisor of Shipbuilding, Conversion and Repair, San Diego, CA

Defense Agency

Director, Defense Contract Audit Agency

PART IV - MANAGEMENT COMMENTS

Office of the Director of Defense Research and Engineering

Defense Contract Audit Agency

MANAGEMENT COMMENTS FROM THE DIRECTOR OF DEFENSE RESEARCH AND ENGINEERING

OFFICE OF THE DIRECTOR OF
DEFENSE RESEARCH AND ENGINEERING
WASHINGTON, DC 20301-3030

4 OCT 1991

MEMORANDUM FOR DIRECTOR, ACQUISITION MANAGEMENT, OFFICE OF INSPECTOR GENERAL, DEPARTMENT OF DEFENSE

SUBJECT: Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (Project No. 9AL-0070)

This replies to your memorandum of 31 July 1991 requesting the Under Secretary of Defense (Acquisition) USD(A) concurrence or noncurrence in the subject report Finding A and the associated Recommendation 1 addressed to USD(A).

The draft report recommends that USD(A) have the Defense Acquisition Board (DAB) conduct a program review of the AOE-6 program before the award of any additional AOE-6 class ships. The draft report recommended that the DAB program review should focus on the need for additional ships, the AOE-6 Program's cost and schedule problems, and the additional cost of a single ship procurement.

I do not concur with Recommendation 1 for USD(A) to convene a DAB program review.

The AOE-9 which is the last AOE-6 class ship to be awarded within the current FYDP was included in the defense budget at the recommendation of the Defense Planning and Resources Board (DPRB). The DPRB decision to acquire AOE-9 in FY-92 in lieu of FY-91 and terminate two outyear AOE-6's was based on production delays and cost overruns at National Steel Shipbuilding and Drydock Corporation (NASSCO) as well as an identified need by the Navy. Current practice requires each AOR be mated with an AE ammunition shuttle ship in order to meet the support requirement of a Carrier Battle Group. This is a highly inefficient operation when one AOE can perform the mission. The DPRB also considered the fact that five older AE's are to be inactivated in the near term because they have reached the end of their useful lives.

The USD(A) has directed the Navy to recompete AOE-9 in FY-92. This decision was a direct result of a USD(A) program review of the AOE-6 class program this spring. The USD(A) has been closely following the situation with the AOE-6 class ships. I do not believe a DAB is required at this time.

for Frank Kendall
Deputy Director
(Tactical Warfare Programs)

MANAGEMENT COMMENTS FROM THE DEFENSE CONTRACT AUDIT AGENCY

Final Report
Page No.

DEFENSE CONTRACT AUDIT AGENCY
CAMERON STATION
ALEXANDRIA, VA 22304-6178

IN REPLY REFER TO

10 SEP 1991

PLD 703.3.3.10 (9AL-0070)

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING, DEPARTMENT OF DEFENSE, ACQUISITION MANAGEMENT DIRECTORATE

SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (Project No. 9AL-0070)

This memorandum is in response to the subject draft report, dated 31 July 1991, on National Steel and Shipbuilding Company's (NASSCO) Cost and Schedule Control System (C/SCS) for the Auxiliary, Oil and Explosive (AOE) Fast Combat Support Ship, contract number N00024-87-C-2002, (IG Project No. 9AL-0070). The AOE contract was competitively awarded in January 1987 for one ship (AOE-6) for $290 million and three options. The AOE-7 option for $199.4 million was exercised on 3 November 1988 and the AOE-8 option for $193.5 million was exercised on 12 January 1990.

This review was not specifically of DCAA, and the IG representative did not provide formal entrance or exit conferences with DCAA. Our comments on specific statements and draft recommendations follow.

17, 21

1. IG comment, pages 29 and 37 of the draft, "DCAA did not focus its reviews on areas essential to providing early disclosure of cost growth conditions and their impact."

NAVSEA has known that the AOE contract would be overrun since September 1987. In July 1988, as a result of our concern regarding * and our discussions with local SupShip personnel regarding cost growth on the AOE program, we initiated a review of NASSCO's financial capability. As part of this audit, we performed a comprehensive analysis of NASSCO's cash flow forecast for the period ending 31 December 1988. The results of our analysis showed a projected * . We concluded in our report, dated 23 September 1988, that NASSCO's * , and it was reasonably possible this condition could endanger performance on government contracts.

18-21

Pages 31 through 37 of the draft report discuss NASSCO's Cost and Schedule Control System Criteria (C/SCSC) compliance and the internal estimates at completion (EACs) contained in position papers in May and September 1990. The IG's report is unclear as to what additional audit steps DCAA should have performed that would have disclosed the extent of the overrun being shown in the position papers. There was no financial and accounting data available to DCAA

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Final Report
Page No.

10 SEP 1991

PLD 703.3.3.10 (9AL-0070)
SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (Project NO. 9AL-0070)

that would allow us to arrive at the conclusions reached in the NASSCO position papers. These position papers were prepared by NASSCO for NAVSEA. They were never furnished to DCAA or the local ACO, and we only became aware of their existence after being advised by the IG representative. Copies were furnished to DCAA by the IG on
18-21 4 March 1991. The IG's draft report (pages 31 through 37) cites that NASSCO's C/SC system did not comply with DoD criteria and as a result, accurate performance measurement did not exist in material, labor or the estimates at completion. The results are consistent with the findings of the NAVSEA team reviews of May 1988 and July 1990, which included DCAA as a team member.

22,23 2. IG comment, page 40 of the draft, "DCAA did not perform essential audit requirements in reviewing NASSCO's cost and schedule control system. DCAA's Contract Audit Manual states that DCAA should conduct periodic reviews of a contractor's cost and schedule control system at least once a year. It also states that certain aspects of the system such as estimates at completion should be reviewed as frequently as necessary to ensure reliance on the system and its output. Because a basic objective of a performance measurement system is to provide early disclosure of existing or potential cost growth conditions, particular emphasis should be placed on areas of control such as variance analyses and estimates at completion. We did not find evidence that DCAA made these reviews."

We disagree with IG's conclusion both because of our prior reviews and because the IG's comments assume a properly validated system. The IG failed to consider that there is currently no reliance placed on the contractor's CPR output as it relates to the percentage of completion and estimates at completion.

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* . DCAA actively participated as a team member on the two C/SCSC reviews performed by NAVSEA teams in both May 1988 and July 1990. We provided written reports to NAVSEA in both reviews. The DCAA report on the second review concluded that NASSCO's accounting/timekeeping policies and procedures do not contain provisions for ensuring that internal controls are operating effectively to preclude unauthorized labor charges to government contracts.

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10 SEP 1991

PLD 703.3.3. 10 (9AL-0070)
SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (Project No. 9AL-0070)

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The deficiencies cited in both NAVSEA reports should have been the basis for a recommendation to withdraw the C/SC system validation. Without an adequate system description or a properly validated C/SC system, surveillance reviews to determine that the contractor is continuing to operate the system as originally validated are without merit. Surveillance reviews were never performed due to the significant deficiencies disclosed in the NAVSEA team reviews. The contractor has not yet implemented the required corrective action and, therefore, it would be an inappropriate and imprudent allocation of audit resources to initiate surveillance effort to ensure reliance on the system and its output, when none existed. We have been advised that NASSCO is attempting to correct the cited deficiencies by 1 October 1991.

NASSCO's C/SC system in regard to EACs was further eroded when NAVSEA instructed NASSCO to freeze the baseline for EACs. In a letter to NASSCO, dated 16 October 1990, NAVSEA said, "In view of the claims,

3

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10 SEP 1991

PLD 703.3.3.10 (9AL-0070)
SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (Project No. 9AL-0070)

submitted to date, NAVSEA will be making a provisional payment to NASSCO. This provisional payment in the final settlement will cause the ship contract prices and EACs to be modified. Therefore, adjustments of EACs is inappropriate at this time and will be dealt with by NAVSEA during the course of negotiations."

Significant differences in estimates at completion currently exist. For example, on the AOE-7, the SupShip's EAC is * while the EAC in the May 1991 CPR is *

Further, we have attempted to address many of the same areas cited in the C/SCSC reviews through other functional audits. In March 1989, we initiated both an EDP General Controls Review and an MMAS review at NASSCO. The EDP review was initiated to evaluate the adequacy of the internal controls and procedures in effect within the EDP system and to determine if controls relating to the MMAS applications are sufficiently reliable to assure the processing of data in a timely and accurate manner. It was also intended to address the accuracy of the material costs produced from the MMAS which were charged and billed to government contracts.

The EDP General Controls Review in conjunction with the MMAS Review, was scheduled to satisfy our concerns relating to some of the more significant cost related concerns raised by the C/SCSC reviews. We met with SupShip personnel regarding the impact of C/SCSC on our proposed reviews and the fact that completion of our review on MMAS would provide some assistance in their review of the contractor's corrective action on C/SCSC.

The ACO did not support the review because NASSCO's shipbuilding contracts did not contain the DFARS clause. As a result, the contractor would not demonstrate its system, and based on the available Agency guidance, effort was discontinued. We were, therefore, unable to render an opinion on the compliance requirements. Since material represents over 50 percent of the costs being billed and we had no assurance that the MMAS was adequate for contract costing purposes or that material costs were being properly charged and allocated to final cost objectives in a timely and accurate manner, we recommended, in a letter to the ACO on 17 April 1989, that the ACO take action to protect the government's interest under FAR 32.503-6.

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Final Report
Page No.

10 SEP 1991

PLD 703.3.3.10 (9AL-0070)
SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (Project NO. 9AL-0070)

In FY 1990, we again attempted to perform an MMAS review at NASSCO. The ACO agreed to support MMAS effort for repair only since NASSCO's repair contracts had incorporated the MMAS DFARS clause.

In FY 1991, we continued our effort to perform an MMAS review. In light of the ACO's objection to reviews of new construction effort, we performed the MMAS effort for repair in conjunction with EDP General and Applications Control Reviews. Our review of repair MMAS disclosed that three separate systems impact MMAS. In two of the three systems, new construction and repair share either common programs or a common data base. In an effort to clearly determine whether separate systems exist, we proceeded with a general controls review as well as an applications controls review for both labor and material. The labor review is in process and the material review has been reprogrammed for MY 1992. The labor review is addressing the contractor's Labor Management System (LMS) system which impacts the C/SCS as well as impacting MMAS.

Additionally, in January 1991, we attempted to perform a CPR review, three progress payment reviews, and a financial capability review. These reviews were curtailed as a result of (i) the significant C/SC system deficiencies; (ii) the frozen CPR baseline which precluded a current analysis; (iii) NASSCO's lack of personnel resources to support both the reviews and their equitable adjustment claims; and (iv) the fact that NAVSEA advised us that they were fully aware of the contractor's current financial condition, they did not consider a DCAA financial capability review necessary and they preferred that we concentrate our efforts on the review of NASSCO's equitable adjustment claims, currently totaling 44 for * (* on AOE-6 through AOE-8, and * on the AOE-9 option which was never exercised).

24 3. IG comment, page 43 of the draft, "As a result of inaccurate estimates at completion, the Navy had paid NASSCO * too much in progress payments as of January 1991."

We received a NASSCO worksheet from SupShip Commander Pence on 26 July 1991, which calculated the * alleged overpayment amount. The amount was computed by comparing an internal NASSCO generated billing amount based on an EAC, dated 1 July 1990, to another NASSCO generated billing amount based on the September 1990 "Pink Book." This is a newer version of the position papers that the IG

5

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Final Report
Page No.

10 SEP 1991

PLD 703.3.3.10 (9AL-0070)
SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (Project NO. 9AL-0070)

19 referred to on page 33 of the draft report. The Pink Book contains no stated purpose and is primarily devoted to exploring problems with NASSCO's cash position as of 15 November 1990. The Pink Book concludes with a legal opinion from NASSCO's counsel regarding the possibility of changing the progress payment limitations on the contract. NASSCO's counsel concludes with the opinion that there is nothing to prevent the Navy from changing the contract, which includes three ships and one option, so NASSCO can receive more money.

Reviews of the CPR would not have disclosed the overprogressing cited by the IG. We are, therefore, unable to comment on the validity of the IG cited overprogressing at this time. It does appear that the IG's computation of overprogressing does not consider the * of equitable adjustments on AOE-6 through AOE-8. The contract billings may even have been under progressed when the equitable adjustment claims are settled, particularly given NAVSEA has acknowledged that it considers the claims have some validity by advancing NASSCO approximately $74.3 million in the contract price for these claims, as well as authorizing $25 million in hardship payment of which NASSCO has to date drawn $12.2 million. If we are able to secure reliable EACs, we will review this area further under the progress payment reviews currently in process.

25 4. IG comment, page 45 of the draft, "DCAA has not evaluated NASSCO's methodology for determining progress payments or the impact of estimates at completion on progress payments. In January 1991, DCAA attempted to initiate a review which would have evaluated estimates at completion and their impact on progress payments. Based on our discussions with DCAA, we found that DCAA did not receive adequate support from the Navy to conduct the review. Also, we believe that DCAA was not timely in initiating such a review. As a result, overprogressing was not detected as early as possible. We believe that DCAA should evaluate NASSCO's method of determining progress payments and the effect that estimates at completion have on progress payments."

Comments are provided in the same order addressed by the IG. Evaluation of NASSCO's methodology would be a duplication of the work performed on a continuous basis by the SupShip Business Review Office. NASSCO does not prepare grass roots estimates to complete for progress payment purposes. NASSCO's progress payments are based on a percentage of completion which it determines largely through observation of physical completion of randomly selected workpackages (about 40,000 per

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PLD 703.3.3.10 (9AL-0070) 10 SEP '91

SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (Project No. 9AL-0070)

ship). The results are reflected in the 32 functional categories contained in the progress payment request. NASSCO's percentage of completion is subsequently reviewed by a SupShip team, including technical personnel who perform their own independent observations. SupShip and NASSCO reach agreement on the percentage to be used on the progress payments. The percentage of completion is applied to the adjusted contract billing price for each progress payment request. This procedure is repeated with each progress payment submission.

We have fully coordinated with the SupShip team and relied on the SupShip technical analysis of physical percentage of completion in conjunction with progress payment reviews. SupShip's technical reviews have resulted in adjustments to the percentage of completion which have reduced the progress payment amounts.

The IG's statement regarding DCAA's evaluation of NASSCO's estimates at completion overlooks the fact that since July 1989 NASSCO has not developed an accurate estimate at completion in its CPR because it has never applied a proper efficiency factor to the unopened work packages.

In July 1989, SupShip asked NASSCO to project overruns in the C/SC system on workpackages not completed or not started by using efficiency factors to reflect the overruns incurred on completed work packages. NASSCO refused. During January 1990, SupShip again directed NASSCO to adjust its estimate at completion to reflect uncompleted and unstarted workpackages and expected overruns. NASSCO responded by changing the efficiency factor to 1.0, which resulted in no overrun being projected on uncompleted workpackages since the budget was still the original contract baseline. In the late summer of 1990, when performance was continuing to deteriorate, SupShip again demanded that NASSCO adjust the EACs for expected continuing overruns. At that point, NASSCO, appealed to NAVSEA that adjusting their EAC would cause them to be overprogressed and that it would be unfair to push them into bankruptcy based on assumed overprogressing since their overrun was caused by problems created by the Navy and there were outstanding equitable adjustment claims. As previously noted, in October 1990, NAVSEA instructed NASSCO not to adjust the EACs until the equitable adjustment claims were settled. For all practical purposes, their CPR has been nonfunctioning since that time.

10 SEP 1991

PLD 703.3.3.10 (9AL-0070)
SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (Project NO. 9AL-0070)

As previously discussed, in January 1991, we attempted to perform a CPR review, three progress payment reviews, and a financial capability review. These reviews were curtailed as a result of the significant C/SC system deficiencies, the frozen CPR baseline, NASSCO's lack of personnel resources to support both the reviews and their equitable adjustment claims, and NAVSEA's decision that they did not need a DCAA financial capability review. Regarding the IG statement that DCAA did not receive adequate support to conduct the reviews, NAVSEA stated to us that the EACs were frozen to allow settlement of the equitable adjustment claims, that any recommendations DCAA might make concerning overprogressing would not be acted upon until settlement of the claims, and, therefore, NAVSEA preferred that we concentrate our efforts on the review of NASSCO's equitable adjustment claims.

We have performed progress payment reviews on an on-going basis. Since 1987, we have performed 15 progress payment reviews on the AOE contract. Given the status of NASSCO's C/SC system, DCAA reviews, for purposes of our evaluation of progress payments, consist of verification of the incurred cost limitations provisions, a review of the escalation limits, validation of the contract price and mathematical verification of the claim. We relied on percentages of physical completion determined by SupShip. As discussed previously, we have been unable to secure reliable NASSCO EACs.

We have completed our reviews of all equitable adjustment claims, with the exception of three claims which should be complete by 31 August 1991. Our current audit plans include:

a. Two progress payment reviews in process.

b. Continued review of NASSCO and SupShip percentage of completion methodology.

c. Labor management system EDP review in process, to be completed by 30 September 1991.

d. MMAS review for new construction scheduled for FY 1992.

e. NAVSEA C/SC team review scheduled for October 1991.

Final Report
Page No.

10 SEP 1991

PLD 703.3.3.10 (9AL-0070)
SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (9AL-0070)

27,29,30 5. IG recommendations, page 49. "We recommend that the Director, Defense Contract Audit Agency:

a. Periodically evaluate variance analyses, system integrity, percentage of completion, and estimates at completion related to the National Steel and Shipbuilding Company's cost and schedule control system to ensure continued reliance on the system and related output."

We concur with this recommendation and will perform the required reviews after a properly validated system exists at NASSCO. We will continue to perform related system reviews until such time that a properly validated system exists.

b. "Verify the National Steel and Shipbuilding Company's method of determining progress payment amounts."

Required reviews will be integrated with C/SC system output after a properly validated system exists at NASSCO. Until such a system exists, we will continue our present verifications, which include reliance on SupShip's technical evaluations.

c. "Update and verify the overprogressed amount on the AOE-6 contract resulting from inaccurate estimates at completion."

Nonconcur. As stated above, the overprogressed amount cited by the IG does not appear to give consideration to the outstanding equitable adjustment claims and is based on financial data not available to DCAA. Upon settlement of the outstanding claims and adjustment of CPR baselines, we can review this amount with SupShip technical assistance. We will perform independent reviews when a properly validated C/SC system exists at NASSCO.

35 6. IG recommendation, page 56 of the draft, that NAVSEA "Request the Defense Contract Audit Agency to determine whether it can perform the services contracted with KPMG Peat Marwick."

10 SEP 1991

PLD 703.3.3.10 (9AL-0070)
SUBJECT: Draft Report on the Audit of the Acquisition of the AOE-6 Fast Combat Support Ship (9AL-0070)

The DCAA Branch Manager has, on numerous occasions, advised NAVSEA that DCAA can perform such services. We did perform financial capability reviews in July 1988 and in November 1989 and attempted to perform one in January 1991.

Questions regarding this memorandum should be referred to Mr. William I. Luke, Chief, Policy Liaison Division, telephone (703) 274-7521.

William J. Sharkey
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10

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