DEPARTMENT OF DEFENSE

AUDIT REPORT

USE OF THE BASELINE CONCEPT IN MANAGING
MAJOR WEAPON SYSTEM ACQUISITIONS

No. 91-063 March 18, 1991

Office of the
Inspector General

INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
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MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION
ASSISTANT SECRETARY OF THE ARMY (FINANCIAL MANAGEMENT)
ASSISTANT SECRETARY OF THE NAVY (FINANCIAL MANAGEMENT)
ASSISTANT SECRETARY OF THE AIR FORCE (FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Report on the Audit of the Use of the Baseline Concept in Managing Major Weapon System Acquisitions (Report No. 91-063)

This is our final report on the Audit of the Use of the Baseline Concept in Managing Major Weapon System Acquisitions for your information and use. Comments on a draft of this report were considered in preparing the final report. We performed the audit from January through September 1990. The audit objectives were to determine the effectiveness of baseline agreements and the extent to which they were used in managing major weapon system acquisitions. In addition, we evaluated the effectiveness of applicable internal controls. The Defense Acquisition Executive identified 98 major weapon system programs that were subject to program baselining requirements during Calendar Year 1990.

Where the Military Departments had fully implemented baseline requirements, baseline agreements provided the Defense Acquisition Executive with an effective mechanism for performing his acquisition oversight responsibilities. Further, the Defense Acquisition Executive was effectively using the baseline concept to manage major weapon system programs and to stabilize programs when problems were identified, within funding constraints. While the Military Departments had basically implemented the baseline concept, internal controls over establishing baseline agreements, preparing baseline descriptions, and reporting baseline breaches to enhance program oversight by the Defense Acquisition Executive needed to be strengthened. The results of the audit are summarized in the following paragraphs, and the details, audit recommendations, and management comments are in Part II of this report.

Navy and Air Force program managers had not amended 10 baseline agreements that the Defense Acquisition Executive contingently approved in February 1988. Also, baseline agreements were never established for three major weapon system programs included in our audit universe. Consequently, the Defense Acquisition Executive was missing critical acquisition

information needed to exercise program oversight for the purpose of enhancing program stability. We recommended that the Under Secretary of Defense for Acquisition, in coordination with the Navy and Air Force, amend the baseline agreements that were contingently approved (page 5).

Baseline agreements for 7 of the 12 major weapon system programs we reviewed in detail were incomplete. As a result, the Defense Acquisition Executive could not fully rely on the program baseline process to promptly alert him of problems affecting major weapon system programs. We recommended that the Under Secretary of Defense for Acquisition include milestones for initial training and initial provisioning as a reporting requirement in the quarterly Defense Acquisition Executive Summary (DAES) report. We also recommended that the Under Secretary require the Military Departments to submit baseline changes to the Defense Acquisition Executive within 90 days of making decisions to proceed with upgrade efforts for major weapon system programs. In addition, we recommended that the Air Force clarify its internal baseline guidance on baseline descriptions to ensure that all significant schedule events are included in baselines (page 9).

The Military Departments were not always reporting baseline breaches to the Defense Acquisition Executive. As a result, the Defense Acquisition Executive was not provided information needed to stabilize programs through his prompt attention to problems and initiation of appropriate corrective action(s). We recommended that the Service Acquisition Executives reemphasize to their program managers the requirement to immediately submit a DAES exception report when there is reasonable cause to believe that a program baseline threshold deviation will occur. We also recommended that the Under Secretary of Defense for Acquisition clarify baseline breach reporting guidance to cause Service Acquisition Executives to promptly submit program deviation reports when baseline deviations are identified by OSD action officers through their reviews of quarterly DAES reports (page 19).

The audit identified internal control weaknesses as defined by Public Law 97-255, Office of Management and Budget Circular A-123, and DoD Directive 5010.38. Controls were not effective to ensure that baseline agreements were established and described in accordance with DoD guidance and U.S.C., title 10, section 2435. Further, controls were not effective to ensure that program managers promptly notified the Defense Acquisition Executive of program breaches against the baseline agreements. All recommendations in this report, if implemented, will correct these weaknesses. A copy of this report is being provided to the senior officials responsible for internal controls within each of the Military Departments.

On December 5, 1990, a draft of this report was provided to the addressees. The Director, Acquisition Policy and Program Integration, concurred with Recommendations A., B.1.a., and B.1.b. In response to Recommendation B.1.c., the Director stated that acquisition procedures for changing baselines for major weapon systems undergoing major upgrades will be more clearly stated in new acquisition policy documents. Based on the Director's comments, we revised Recommendation B.1.c. to resolve the disconnect between existing DoD guidance on changing program baselines for systems undergoing upgrade efforts and the Military Departments' implementation of the DoD guidance. Accordingly, we ask that the Director, Acquisition Policy and Program Integration, provide final comments on Recommendation B.1.c., including proposed corrective actions and completion dates.

The Air Force concurred with Recommendation B.2., stating that its internal baseline guidance has been revised to require that baseline descriptions include all significant schedule events.

The Navy and Air Force concurred with Recommendation C.1., stating that guidance was issued to their program managers reemphasizing the requirement to immediately submit a DAES exception report when there is reasonable cause to believe that a baseline breach will occur. Based on the Army's comments, we have deleted draft Recommendation C.2., which addressed the Army Acquisition Executive's oral instructions concerning the submission of DAES exception reports. Therefore, draft Recommendations C.3. and C.4. have been renumbered Recommendations C.2. and C.3. in the final report. Also, in response to the Army's comments, we directed Recommendation C.1. to the Army in the final report. Accordingly, we ask that the Army Acquisition Executive provide comments to the final report indicating concurrence or nonconcurrence with Recommendation C.1. 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, please state your specific reasons. If appropriate, you may propose alternative methods for accomplishing desired improvements.

The Navy concurred with Recommendation C.2., stating that it submitted to the Defense Acquisition Executive an AN/BSY-2 Submarine Combat System program baseline change that addressed all stated baseline breaches.

The Director, Acquisition Policy and Program Integration, partially concurred with Recommendation C.3., stating that a clearer discussion of program reporting and its relationship to the DAES exception report will be included in new acquisition policy documents. Management's planned corrective action will not cause the Military Departments to submit program deviation

reports, as required by DoD Instruction 5000.50, "Defense Acquisition Executive Summary (DAES)," March 24, 1989. We therefore request that the Director, Acquisition Policy and Program Integration, reconsider his response to Recommendation C.3., and provide his final position in response to this final report.

The complete texts of management's comments and our detailed audit responses are included in Appendixes F through I. This report identifies no potential monetary benefits (Appendix J).

DoD Directive 7650.3 requires that all audit recommendations be resolved promptly. Accordingly, the Director, Acquisition Policy and Program Integration, should provide final comments on Recommendations B.1.c. and C.3., and the Assistant Secretary of the Army (Research, Development and Acquisition) should provide final comments on Recommendation C.1. within 60 days of the date of this memorandum.

The courtesies extended to the audit staff are appreciated. If you have any questions on this audit, please contact Mr. John E. Meling at (703) 614-3994 (AUTOVON 224-3994). A list of the audit team members is in Appendix L. Copies of this report are being provided to the activities listed in Appendix M.

Robert J. Lieberman

Robert J. Lieberman
Assistant Inspector General
for Auditing

Enclosure

cc:
Secretary of the Army
Secretary of the Navy
Secretary of the Air Force

REPORT ON THE AUDIT OF THE USE OF THE BASELINE CONCEPT IN MANAGING MAJOR WEAPON SYSTEM ACQUISITIONS

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Prepared by:
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REPORT ON THE AUDIT OF THE USE OF THE BASELINE CONCEPT IN MANAGING MAJOR WEAPON SYSTEM ACQUISITIONS

PART I - INTRODUCTION

Background

In June 1986, the President's Blue Ribbon Commission on Defense Management (the Packard Commission) reported that impressive savings could be achieved by eliminating hidden costs that program instability brings. The Packard Commission reported that hidden costs could be minimized, and the stability of DoD acquisition programs enhanced, by various means, including establishing program baselines for major weapon systems. To enhance program stability, Congress enacted the Packard Commission's recommendations into Public Law 99-500 (U.S.C., title 10, section 2435) on October 18, 1986.

Baseline agreements represent a contract between the Military Department program managers for major weapon system programs and the Acquisition Executives to execute the programs within certain key parameters. Baseline descriptions are to include key parameters on performance, cost, schedule, and other factors critical to a program's success. The Defense Acquisition Executive (DAE) approves baseline agreements for Defense Acquisition Board managed programs, while the Service Acquisition Executives approve baseline agreements for Component managed programs. Under the baseline concept, program managers are given authority to manage their programs as long as they do not breach a performance, cost, or schedule baseline parameter. According to the Packard Commission, this arrangement is to enhance program stability.

DoD Directive 5000.45,* "Baselining of Selected Major Systems," August 25, 1986, establishes DoD policies and procedures for implementing baseline agreements for major weapon system programs that are in the development or production phases of the acquisition process. Further, the Directive assigns responsibilities for preparing, submitting, and changing baselines; reporting program performance against the baseline; and notifying the DAE of potential breaches of the baseline agreement.

DoD Instruction 5000.50,* "Defense Acquisition Executive Summary (DAES)," March 24, 1989, requires that program managers make a

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* Program baseline requirements in DoD Directive 5000.45 and DoD Instruction 5000.50 will be included in the new DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," and DoD Manual 5000.2-M, "Defense Acquisition Management Documentation and Reports."

quarterly report of program progress against parameters established in baseline agreements. The Acquisition Executives use the DAES report as a tool to perform their acquisition oversight responsibilities. In 1990, the DAE identified 98 major weapon system programs that were subject to DAES reporting requirements.

Objectives and Scope

The audit objectives were to determine the effectiveness of baseline agreements in enhancing program stability and the extent to which baseline agreements were used in managing major weapon system acquisitions. In addition, we evaluated the effectiveness of applicable internal controls.

We focused our audit on the use of baselines for major weapon systems where program stability was more likely to be enhanced. To this end, we excluded 23 of the 98 systems subject to baselining requirements because of the programs' status in the acquisition process. For 20 of the 23 systems, baselines were not likely to enhance program stability because either the programs were terminated as a result of the budget process (5 major systems) or the programs had final production quantities under contract (15 major systems). We excluded the other three systems because they were classified, special access programs. For the remaining 75 systems, we determined whether the DAE had received and approved baseline agreements since the implementation of the baseline requirement in August 1986. In addition, we selected a random sample of 12 of the 75 systems for a detailed review of the baseline process. Appendix A lists the 12 major weapon system programs selected for review, and Appendix B explains how we selected the programs for review.

To accomplish the audit objectives, we evaluated the process for establishing and preparing baseline agreements, reporting program performance against baseline agreements, and notifying the DAE of program breaches against the baseline agreements. We also evaluated the adequacy of the Acquisition Executives' oversight and use of baseline information in managing major weapon system programs. In this regard, we reviewed baseline documentation prepared for the 12 major weapon system programs from February 1988 to September 1990.

This program results and compliance audit was made from January through September 1990 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 considered necessary. The activities visited or contacted during the audit are listed in Appendix K.

Internal Controls

We reviewed internal controls related to the prompt preparation, submission, review, and approval of baseline agreements; the accurate and prompt reporting of program performance against baseline agreements in DAES reports; and the prompt notification of breaches against the baseline agreements to the DAE.

Internal controls were inadequate to ensure that baseline agreements were promptly established and prepared in accordance with DoD guidance and U.S.C., title 10, section 2435. Further, internal controls were inadequate to ensure that program managers promptly notified the DAE of threshold breaches against baseline agreements. We did not consider any of these weaknesses to be material. These internal control weaknesses are discussed in Part II of this report.

Prior Audit Coverage

The General Accounting Office (GAO) issued Fact Sheet No. GAO/NSIAD-89-19FS (OSD Case No. 7875), "Defense Management, Status of Recommendations by Blue Ribbon Commission on Defense Management," in November 1988. With respect to the Blue Ribbon Commission's recommendations on program baselines, GAO reported that:

- In August 1987, the DAE directed the Military Departments to submit baselines for all major weapon system programs in full-scale engineering development or production. As of January 1988, the Military Departments had baselined every major weapon system program at or past the Milestone II (full-scale engineering development) stage of the acquisition process.

- In February 1988, the DAE approved a majority of the program baselines and established a quarterly baseline reporting mechanism.

The GAO fact sheet contained no recommendations on program baselines.

Other Matters of Interest

One of our audit objectives was to determine the effectiveness of baseline agreements as a mechanism for controlling program instabilities and attendant cost growth. The use of baseline agreements in the system acquisition process was not intended to eliminate all factors causing program instability, such as budget reductions, but rather to enhance program stability through the DAE promptly taking appropriate and necessary actions to resolve identified problems. Most major weapon system programs subject to baselining requirements encounter problems affecting program

stability during the program's acquisition process. This is truer in 1990 because instabilities in the overall Defense budget and recent changes in eastern Europe are forcing DoD to reexamine the need, priority, and annual funding levels for many acquisition programs. Because of these program instabilities, this is an opportune time for the DAE to use baselining as a tool to help stabilize major weapon system programs.

DoD is still implementing the baseline concept for major weapon system programs. Part II of our report contains findings and recommendations concerning the adequacy of DoD's implementation of the baseline concept. The conditions noted affected the DAE's ability to rely on the baseline concept to promptly alert him of problems affecting program stability on the 12 major weapon system programs we reviewed in detail. In addition, 13 of the 75 major weapon system programs included in the scope of our audit either had an incomplete baseline agreement as determined by the DAE or still needed a baseline agreement. We believe that implementation of our audit recommendations will resolve the systemic shortcomings that we noted.

Regardless of the conditions noted during the audit, we believe that the baseline concept, when fully implemented, will enhance program stability. We formed this conclusion based on the functioning of the baseline process for those systems in our detailed review that had basically implemented the baseline concept. We observed that OSD action officers were being alerted to problems affecting the system's acquisition process through information reported against program baselines in the quarterly DAES report. Based on this information, the OSD action officers' assessments resulted in:

- Service Acquisition Executives being requested to submit program deviation reports addressing program breaches;

- programs, where assessments identified significant issues, being discussed at the DAE's monthly DAES review meetings;

- unscheduled Defense Acquisition Board program reviews being held to assess the restructuring of programs with significant acquisition issues; and

- baseline agreements being changed after appropriate review by the DAE.

Although the use of program baselines is still evolving, available evidence indicates that the DAE can effectively use the baseline process as a mechanism for controlling program instabilities and attendant cost growth.

PART II - FINDINGS AND RECOMMENDATIONS

A. Establishing Baseline Agreements

FINDING

Navy and Air Force program managers had not amended 10 baseline agreements that the Defense Acquisition Executive (DAE) contingently approved in February 1988. Also, the Army and Air Force were still establishing baseline agreements for three major weapon system programs (two Army and one Air Force) that did not have baseline agreements as of February 1988. These conditions occurred because the Navy and Air Force did not submit for approval DAE requested additions to contingently approved baseline agreements, and the DAE did not establish a definite date for the Military Departments to submit outstanding program baseline agreements until May 30, 1990. As a result, the DAE lacked information needed to enable him to fully use the baseline concept as a mechanism for controlling program instabilities and attendant cost growth.

DISCUSSION OF DETAILS

Background. DoD Directive 5000.45, "Baselining of Selected Major Systems," August 25, 1986, requires that baseline agreements be established for all major weapon system programs in the full-scale engineering development or production phase of the acquisition process. The Military Departments were required to submit initial baseline agreements for existing major weapon system programs by November 25, 1986, 90 days after the new Directive was issued. For Calendar Year 1988, the DAE identified 91 programs that required baseline agreements. In February 1988, the DAE approved 24 program baseline agreements submitted by the Military Departments and contingently approved another 46 program baseline agreements. The DAE's approval was contingent upon the Military Departments adding certain critical cost, schedule, and performance parameters to the baseline agreements. The DAE stated that these additional parameters were deemed minimally necessary for meaningful baselines. In addition, the DAE identified another 21 programs where the Military Departments were to submit baseline agreements at subsequent program milestone reviews.

Systems With Contingently Approved Baselines. Navy and Air Force program managers did not add specific cost, schedule, and performance parameters to baselines, as required by the DAE, for 10 of the 46 baseline agreements that the DAE contingently approved in February 1988. Baseline officials in the Office of the Under Secretary of Defense for Acquisition advised us that they had not pursued this issue with the Navy and Air Force because they believed that the cost, schedule, and performance

parameters omitted from the initial baseline agreements were no longer relevant because of the passage of time. However, our review of the Selected Acquisition Reports for the 10 major weapon system programs showed that the omitted parameters were still relevant (Appendix C).

For example, the DAE requested that the Navy include Harpoon/ Standoff Land Attack Missile (SLAM) performance parameters in the baseline agreement. The performance parameters in the baseline were for the all-weather, antiship configurations of the Harpoon missile instead of the SLAM performance parameters that were for the anti-fixed-target configuration of the Harpoon missile. As of September 30, 1990, the Navy had not amended the Harpoon baseline agreement with the required performance parameters. The performance parameters were still critical because operational testing for the SLAM did not start until April 1990, and the full-rate production decision was not scheduled until April 1991. As a result, the DAE will not be promptly alerted, through the baseline reporting process, when performance problems occur that could impact the scheduled production decision.

We did note that in September 1989, the Air Force attempted to amend baseline agreements for two of the five Air Force programs. However, the DAE did not approve the amended baseline agreements because the Air Force also attempted to change baseline cost parameters that had not been breached.

As of September 30, 1990, the Office of the Under Secretary of Defense for Acquisition was establishing a Consolidated Acquisition Reporting System (CARS) data base to support major weapon system reporting requirements for the Defense Acquisition Executive Summary, the Selected Acquisition Report, the Unit Cost Report, and the program baseline. When established, the CARS data base will contain the approved program baseline for every major weapon system. As part of the process of establishing the CARS data base, OSD baseline officials were working with Navy and Air Force baseline officials to add critical parameters omitted from the baseline agreements that the DAE contingently approved in February 1988. As of September 30, 1990, program baselines in the CARS data base included all or some of the missing critical parameters for 3 of the 10 major weapon system programs discussed above.

Systems Without Baselines. As of September 30, 1990, the Army and Air Force were still establishing baseline agreements for 3 of the 21 major weapon system programs that did not have baseline agreements in February 1988. Baseline agreements for the three programs were to have been submitted at subsequent program milestone reviews. This condition occurred because the DAE did not, in his February 1988 memorandums to the Military Departments, establish a definite date by which the Military

Departments were to submit the outstanding program baseline agreements. On May 30, 1990, the DAE directed the Army and Air Force to submit outstanding program baseline agreements for approval by June 15, 1990. The three programs were the Joint Tactical Fusion; Forward Area Air Defense Command, Control and Intelligence System (FAADS C^2I); and Small Intercontinental Ballistic Missile.

Significant restructuring of the acquisition strategies for the three programs was also a major factor why the program managers had not prepared and submitted baseline agreements to the DAE since February 1988. As of September 30, 1990, the FAADS C^2I baseline agreement was at OSD for approval, and the Army and Air Force Acquisition Executives had returned baseline agreements for the other two systems to the program managers for further changes. Without baseline agreements, the Acquisition Executives did not have a management mechanism to enable real-time oversight to control program instabilities and attendant cost growth.

Conclusion. The DAE will not be able to fully use the baseline concept as a mechanism for controlling program instabilities and attendant cost growth until meaningful baseline agreements are established for all major weapon system programs. We support the DAE's efforts to have the Navy and Air Force add relevant parameters to the 10 contingently approved baseline agreements as part of the process of establishing program baselines in the CARS data base. Through his May 30, 1990, memorandum, the DAE took the action needed to obtain baseline agreements for programs without an approved baseline agreement.

RECOMMENDATION FOR CORRECTIVE ACTION

We recommend that the Under Secretary of Defense for Acquisition, in coordination with the Navy and Air Force Acquisition Executives, amend the 10 contingently approved program baseline agreements by adding all relevant performance, schedule, and cost parameters (identified in Appendix C) to program baselines included in the new Consolidated Acquisition Reporting System data base.

MANAGEMENT COMMENTS

The Director, Acquisition Policy and Program Integration, Office of the Under Secretary of Defense for Acquisition, concurred stating that his office, in coordination with the Military Departments, had amended the 10 contingently approved program baselines with all parameters still deemed relevant in creating the new CARS data base.

B. Preparing Baseline Descriptions

FINDING

Baseline descriptions for 7 of the 12 major weapon system programs reviewed were incomplete. This condition occurred because:

- DoD baseline guidance did not require that initial training and provisioning milestones be included in baseline descriptions for programs in the production stage;

- the Military Departments were not submitting baseline changes, along with Component milestone decision memorandums, to the Defense Acquisition Executive when making decisions to proceed with upgrade efforts for major weapon system programs;

- Air Force baseline guidance permitted program managers to include only one significant schedule event each year in baseline descriptions; and

- Air Force baseline guidance directed program managers to include funded versus total program production costs in baseline descriptions.

As a result, the Defense Acquisition Executive (DAE) could not fully rely on the baseline process to promptly alert him of problems affecting major weapon system programs.

DISCUSSION OF DETAILS

Background. DoD Directive 5000.45, "Baselining of Selected Major Systems," August 25, 1986, establishes baseline description requirements for major weapon system programs in the development and production stages of system acquisition. The Directive requires that baseline descriptions for programs in the development stage include:

- system performance parameters that are considered critical to the success of the system's mission;

- the program schedule, which shows important milestones, such as Milestone III production decision reviews and initial operating capability dates; and

- unit production cost goals and total development cost goals.

The Directive requires that baseline descriptions for programs in the production stage include:

- demonstrated system performance parameters, together with acceptable limits of variation of these parameters;

- a validated estimate of the cost of the remaining program and the average unit production, with a funding profile showing cost by fiscal year; and

- production delivery schedules.

The DAE clarified and supplemented the baseline description requirements with guidance issued to the Military Departments in February 1988. In Appendixes C and D, we list the specific baseline requirement information that DoD established to implement DoD Directive 5000.45 baseline description requirements. In addition to those requirements, U.S.C., title 10, section 2435, "Enhanced Program Stability," requires that initial training and initial provisioning (system operating and maintenance support) be included in the baseline description for systems in the production phase.

Adequacy of Baseline Descriptions. Baseline agreements for 7 of the 12 major weapon system programs reviewed included incomplete baseline descriptions. The seven incomplete baseline agreements consisted of two of the six development programs and five of the six production programs we selected for review. In Appendix D, we list the specific baseline description requirements that were not included in the baseline agreements for the seven programs. For example, the baseline description for the Standard Missile 2 program did not include planned Milestone III production decision reviews.

Baseline descriptions for the seven programs were incomplete because the DoD Directive that implemented U.S.C., title 10, section 2435, did not require program managers to include initial training and initial provisioning milestones in production baselines, and the Military Departments were not requiring program managers to submit baseline changes for programs undergoing upgrade efforts. Also, the Air Force's internal baseline guidance contributed to incomplete program baseline descriptions.

U.S.C., Title 10, Section 2435. The DoD baseline guidance that implemented U.S.C., title 10, section 2435, did not require Military Department program managers to include initial training and initial provisioning milestones in production baselines. DoD Directive 5000.53, "Manpower, Personnel, Training, and Safety (MPTS) in the Defense Systems Acquisition Process," December 30, 1988, defines initial training as the

process of developing training courses and acquiring simulators, instructors, and facilities to train personnel on operating and maintaining a new weapon system. DoD Directive 4140.40, "Provisioning of End Items of Material," June 28, 1983, defines initial provisioning as the process of determining and acquiring support items necessary to operate and maintain a new weapon system until the normal supply system is established. As a result of the DoD baseline guidance, initial training and initial provisioning milestones were not included in four of the six production baselines reviewed. DoD baseline officials believed that DoD satisfied the intent of the U.S.C. by requiring program managers to include the initial operational capability milestones in baseline descriptions for programs in production.

DoD defines initial operational capability as the Military Department's first attainment of the capability to effectively employ a weapon system, which is operated by an adequately trained, equipped, and supported military unit or force. Therefore, we agree that initial training and initial provisioning are part of each major weapon system's initial operational capability requirement. However, the initial operational capability milestone alone does not provide the DAE adequate information to monitor the program manager's progress in meeting the initial training and initial provisioning requirements needed to attain the initial operational capability milestone.

Initial Training. Personnel in the Office of the Assistant Secretary of Defense (Force Management and Personnel) stated that initial training had been underemphasized in the acquisition process because DoD acquisition officials were primarily concerned with delivering major weapon systems by the milestone established for initial operational capability. As a result, initial training requirements were often not available on the initial operational capability date.

For example, problems associated with initial training were discussed in the Air Force Systems Command's "Simulator Broad Area Review," December 1989. The review indicated that program managers for several major aircraft and major aircraft modification programs did not have training simulators delivered by the aircrafts' initial operational capability dates. The review cited instances where training simulator deliveries occurred from 12 to 79 months after the initial operational capability date. According to the U.S.C., initial training problems like these need to be brought to the DAE's attention through the baseline reporting process, to give the DAE an opportunity to resolve problems and initiate appropriate corrective actions. As of September 1990, we did not identify any problems to indicate that program managers would not satisfy initial training requirements before the planned initial

operational capability date for the six production systems reviewed.

Personnel in the Office of the Assistant Secretary of Defense (Force Management and Personnel) agreed that critical initial training milestones should be identified and monitored in the baseline reporting process. This should be done to give initial training requirements the increased visibility and emphasis necessary to ensure that trained operators and support personnel are available by the system's initial operational capability date. To implement the requirements in DoD Directives 1430.13, "Training Simulators and Devices," August 22, 1986, and 5000.53, the officials suggested that the following milestones were often critical to satisfying initial training requirements.

- A date for approval of a Training Development Plan outlining how training will be accomplished for the system.

- Contract award dates for development and production of any training simulators required.

- A "ready for training date," that is, when courses, instructors, facilities, and equipment will be in place and training can begin.

DoD baseline officials indicated that the intent of the initial training requirement in U.S.C., title 10, section 2435, could be satisfied if DoD required program managers to include initial training milestones in the quarterly Defense Acquisition Executive Summary (DAES) report, which the DAE uses to monitor a program's progress. We agree that the DAES reporting requirement would satisfy the intent of the U.S.C. In addition, we believe that the DAE should invite the Assistant Secretary of Defense (Force Management and Personnel) to participate in quarterly DAES program assessments to ensure that initial training problems are promptly brought to the DAE's attention.

Initial Provisioning. Personnel in the Office of the Assistant Secretary of Defense (Production and Logistics) stated that initial provisioning had also been underemphasized in the acquisition process because DoD acquisition officials were primarily concerned with delivering major weapon systems by the milestone established for initial operational capability. As a result, initial stocks of support items were often not available to sustain the operation of weapon systems until the normal supply systems were established, as required by DoD Directive 4140.40.

Problems related to initial provisioning were discussed in Office of the Assistant Secretary of Defense (Production and Logistics) study, "Provisioning Process Review," May 1990. The study stated

that provisioning was not adequately integrated into the system's acquisition process, and that the lack of integration resulted in late delivery of initial spares and in delay of initial operational capability dates. Accordingly, we believe that initial provisioning also warrants the DAE's attention in the baseline process.

Officials in the Office of the Assistant Secretary of Defense (Production and Logistics) agreed that critical initial provisioning milestones should be identified and monitored in the baseline reporting process to give initial provisioning requirements the increased visibility and emphasis necessary to ensure that initial provisioning items are available by the system's initial operational capability date. Based on the requirements of DoD Directive 5000.39, "Acquisition and Management of Integrated Logistic Support for Systems and Equipment," November 17, 1983, the officials suggested that a date for approval of the Integrated Logistics Support Plan and the provisioning plan, and delivery dates for necessary spare and repair parts were critical to satisfying initial provisioning requirements.

DoD baseline officials also indicated that the intent of the initial provisioning requirement in the U.S.C. could be met by requiring program managers to include milestones for initial provisioning in the quarterly DAES report. Since the Office of the Assistant Secretary of Defense (Production and Logistics) was participating in the quarterly DAES program assessments, initial provisioning milestone requirements could be added to the subjects assessed in the quarterly DAES assessment process.

Systems Undergoing Upgrade Efforts. The Military Departments did not submit an approved baseline change, along with a Component milestone decision memorandum, to the DAE when decisions were made to proceed with major and non-major upgrade efforts for three of the six production systems reviewed. The three systems were the Army's Hellfire Missile, the Navy's Standard Missile 2, and the Air Force's Defense Meteorological Satellite program. DoD defines upgrade efforts as system improvements made after initial system deployment to reduce or eliminate operational deficiencies in the system. DoD defines a major upgrade effort as a program that meets the criteria for being designated a separate major acquisition program.

DoD Directive 5000.1, "Major and Non-Major Defense Acquisition Programs," September 1, 1987, establishes Milestone V as a major upgrade milestone decision point. Accordingly, the DAE approves program baseline changes for Defense Acquisition Board-managed programs at Milestone V. On October 30, 1989, the DAE issued a baseline policy memorandum to the Military Departments advising them that proposed baseline changes would be permitted for

Component-managed major weapon system programs if the baseline change documents were accompanied by a Component milestone decision memorandum. Accordingly, the Military Departments were provided a means to change program baselines for Component-managed major weapon system programs undergoing major and non-major upgrade efforts.

Since the three production systems with upgrade efforts were Component-managed programs, the Military Departments were delegated authority to make the milestone decisions. When the Military Departments made their decisions to proceed with the major and non-major upgrade efforts, they did not require their program managers to submit baseline change documents for approval. In respect to existing baseline agreements approved for the three systems, they contained historical program performance, cost, and schedule parameters that had occurred in the past. Because the Military Departments did not require the program managers to submit program baseline changes, the DAE and Service Acquisition Executives could not use the existing baselines as a management mechanism for controlling program instabilities.

For example, the Hellfire Missile system's baseline description did not include performance and schedule requirements associated with two significant upgrades. The Hellfire's last program milestone review (production decision) was held in November 1981, and the baseline agreement for the Hellfire was established in February 1988. Since February 1988, the Army has initiated two non-major upgrades for the Hellfire: the Improved Hellfire Warhead and the Hellfire Optimized Missile system. When the Army approved the two upgrades, it did not require the Hellfire program manager to submit baseline change documents for approval and submission to the DAE. As a result, the Hellfire's existing baseline agreement did not provide the DAE and Army Acquisition Executive a real-time management mechanism for controlling program instabilities.

Air Force Policy. Air Force Acquisition Policy Memorandum 90M-008, "Policy Statement on Acquisition Program Baselines," July 19, 1990, established unclear criteria for including program events in baseline descriptions and incorrect criteria for including program cost information in baseline descriptions. Specifically, program managers omitted significant events, such as major test milestones (beginning and ending dates for developmental and operational tests), from baseline agreements for all four Air Force major weapon system programs reviewed. This condition occurred because the Policy Memorandum required program managers to use at least one significant event each fiscal year in the baseline description. Program managers misinterpreted this requirement to mean that they were only required to include one significant event each fiscal year in

the baseline agreements. (In Appendix D, we list the significant events that were omitted from the baseline descriptions for the four programs.) As a result, the DAE was not provided information in the baseline process to exercise program oversight and to take corrective actions, when necessary.

Also, the program manager for the Over-the-Horizon Backscatter Radar system did not include total procurement costs in the baseline description. This condition occurred because the Policy Memorandum directed program managers to include only the funded portion of program procurement costs in production stage baseline agreements. The Air Force considered procurement costs funded when the costs were included in the President's annual budget (includes program procurement funding information for the next fiscal year and the following 5 fiscal years). The Air Force issued this direction because it believed that baseline agreements were intended to define program performance, cost, and schedule parameters that program managers were accountable for and to measure program managers' performance. Therefore, the Air Force believed that only program funds that the program manager controlled should have been included in the baseline agreement. In the case of the Over-the-Horizon Backscatter Radar system, the program manager did not include unfunded procurement costs of about $760 million in the baseline description.

The issue of including total program procurement costs in the baseline description had been a point of contention between OSD and the Air Force since the baseline concept was implemented in August 1986. The issue was satisfactorily resolved in July 1990. Future Air Force baseline agreements will include total program procurement costs in the acquisition program baseline description.

Effect of Incomplete Baseline Descriptions. Without complete information in baseline descriptions, the DAE did not have a real-time control mechanism in the baseline process to identify problems and to initiate corrective actions, when necessary, to avoid or minimize the effects of cost overruns, schedule slippages, or substandard performance. Fortunately, the program managers for the 12 major weapon system programs reviewed had not breached any of the performance, schedule, and cost parameters that were omitted from baseline descriptions. Consequently, we did not identify an adverse effect from the program managers not preparing complete baseline descriptions. However, we are making recommendations to ensure that the DAE is promptly alerted when problems do occur and to give him an opportunity to avoid or minimize the effects of cost overruns, schedule slippages, or substandard performance.

Conclusion. DoD is making progress in improving the completeness of baseline descriptions included in program

baseline agreements. In this endeavor, the DAE needs to implement the baseline description requirements in U.S.C., title 10, section 2435, pertaining to initial training and initial provisioning milestones in production baselines. Also, the DAE needs to require the Military Departments to submit baseline changes, along with Component milestone decision memorandums, to the DAE within 90 days of making decisions to proceed with upgrade efforts for major weapon system programs. In addition, the Air Force needs to clarify its Policy Memorandum on baseline descriptions to ensure that all significant schedule events are included in the baselines.

RECOMMENDATIONS FOR CORRECTIVE ACTION

1. We recommend that the Under Secretary of Defense for Acquisition:

a. Establish a requirement in the new DoD Manual 5000.2-M, "Defense Acquisition Management Documentation and Reports," for program managers to establish milestones for initial training and initial provisioning in the quarterly Defense Acquisition Executive Summary reports for major weapon system programs in the production phase of acquisition.

b. Invite the Assistant Secretary of Defense (Force Management and Personnel) to participate in quarterly Defense Acquisition Executive Summary program assessments of each program managers' progress toward meeting initial training requirements.

c. Establish a requirement in the new DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," for the Military Departments to submit an approved baseline change, along with a Component milestone decision memorandum, to the Defense Acquisition Executive within 90 days of the program milestone review when decisions are made to proceed with upgrade efforts.

2. We recommend that the Air Force Acquisition Executive clarify Acquisition Policy Memorandum 90M-008, "Policy Statement on Acquisition Program Baseline," to require that baseline descriptions include all significant schedule events, as required in baseline guidance issued by the Defense Acquisition Executive.

MANAGEMENT COMMENTS

The Director, Acquisition Policy and Program Integration (AP&PI), Office of the Under Secretary of Defense for Acquisition, concurred with Recommendation 1.a. stating that the draft DoD Manual 5000.2-M, "Defense Acquisition Management Documentation and Reports," includes more definitive language regarding the

inclusion of training and provisioning intermediate milestones in the DAES for major weapon system programs.

The Director, AP&PI, concurred with Recommendation 1.b. stating that the Office of the Assistant Secretary of Defense (Force Management and Personnel) personnel had been invited to attend the last eight DAES program assessment meetings and had attended five.

In regard to Recommendation 1.c., the Director, AP&PI, stated that existing acquisition policy and procedures in DoD Directives 5000.45, "Baselining of Selected Major Systems," August 25, 1986, and 5000.1, "Major and Non-Major Defense Acquisition Programs," September 1, 1987, permitted program managers to change baselines for major weapon system programs undergoing major upgrades. The Director stated that procedures for changing baselines for major weapon systems undergoing major upgrades are more clearly stated in the draft DoD Manual 5000.2-M.

The Air Force concurred with Recommendation 2. stating that Addendum 1 to Air Force Acquisition Policy Memorandum 90M-008, "Policy Statement on Acquisition Program Baseline," November 12, 1990, established the requirement for baseline descriptions to include all mandatory schedule events, as required in baseline guidance issued by the DAE.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

Proposed management actions are considered responsive to the intent of Recommendation 1.a. Management's actions will not be considered completed until DoD Manual 5000.2-M is published and includes the more definitive language regarding the inclusion of training and provisioning intermediate milestones in the DAES for major weapon system programs.

With regard to Recommendation 1.c., management correctly stated that DoD acquisition policy and procedures do permit program managers to change program baselines for major weapon system programs undergoing major upgrades. However, the problem remains that the Military Departments, for Component-managed programs, were not submitting an approved baseline change, along with a Component milestone decision memorandum, to the DAE when decisions were made to proceed with major and non-major upgrade efforts. Based on management's comments, we modified the finding and revised the recommendation. In our opinion, implementation of the revised recommendation will resolve the apparent disconnect between DoD's guidance and the Military Department's implementation of the DoD guidance.

C. Reporting Baseline Breaches

FINDING

The Military Departments were not always reporting breaches of program baselines to the DAE, as required by DoD Instruction 5000.50, "Defense Acquisition Executive Summary (DAES)," March 23, 1989. This condition occurred because program managers did not comply with the requirement to submit DAES exception reports to the DAE when program breaches were anticipated, and Service Acquisition Executives did not comply with the requirement to submit a program deviation report to the DAE within 45 days of the identification of the baseline deviation. As a result, the DAE was not being provided real-time information in the baseline process to stabilize programs through prompt attention to problems and initiation of appropriate corrective actions.

DISCUSSION OF DETAILS

Background. DoD Directive 5000.45, "Baselining of Selected Major Systems," August 25, 1986, establishes criteria for reporting breaches of performance, schedule, and cost parameters. Performance breaches occur when test data indicate that one or more baseline performance parameters will not be met. Schedule breaches occur when a scheduled event will slip by more than 180 days. Cost breaches occur when development costs are estimated to increase by more than 15 percent in base-year (constant) dollars for systems in development or when procurement costs are estimated to increase by more than 5 percent in base-year dollars for systems in production.

DoD Instruction 5000.50 requires Military Department program managers to immediately submit a DAES exception report to the DAE when there is reasonable cause to believe that a program baseline breach will occur. In the DAES exception report, the program managers are to provide information alerting the DAE of potential or significant problem areas in the programs. Further, the Instruction requires that the Service Acquisition Executives submit a program deviation report to the DAE within 45 days of the DAES exception report. In the program deviation report, the Service Acquisition Executives are to address the program baseline parameters that can no longer be met, the reasons for not meeting the parameters, and the proposed steps to correct the problems. Further, should the deviations be unrecoverable, the Service Acquisition Executives are to request changes in baseline parameters that were breached to stabilize the programs.

DAES Exception Reports. Although baseline breaches were anticipated to occur in 8 of the 12 programs reviewed, program managers did not submit DAES exception reports for 7 of the

8 programs. The baseline breaches were anticipated to occur from July 1988 to July 1990. Factors external to the program manager, including program reductions in the President's budget, caused baseline breaches in six of the eight programs, while factors within the program manager's control caused baseline breaches in the remaining two programs (a system performance problem on one program and schedule and cost problems on the other program).

Military Department program managers did not submit DAES exception reports because they did not understand, or overlooked, the criteria for reporting baseline breaches on the seven programs. For example, the program manager for the AN/BSY-2 Submarine Combat System did not submit a DAES exception report when major test completion dates slipped by more than 180 days and development costs increased by more than 15 percent. The program manager believed that a DAES exception report was not required unless OSD specifically requested one. As a result, the DAE was not promptly alerted of the test schedule and cost breaches and their impact on the Combat System's planned production decision review in December 1990.

Another program manager did not report an anticipated baseline breach because it was caused by a baseline breach in another major weapon system program. Specifically, the program manager for the AN/BSY-1 Combat System did not submit a DAES exception report for a schedule breach that was caused by a delivery schedule breach on SSN 688 Los Angeles Class Submarines, the platforms for three Combat Systems. The deputy program manager stated that the three Combat Systems were ready for shipment on time; however, the three Combat Systems could not be delivered until the SSN 688 Submarine contractor was ready to install the three Combat Systems on the platforms. The program manager for the Combat System was reluctant to report his schedule breach because the program manager for the SSN 688 Submarine had not declared a schedule breach. As a result, the DAE was not promptly alerted of the Combat System's delivery schedule breach and the breach's impact on the Combat System's test schedules and initial operating capability dates, which were delayed by more than 180 days.

Program Deviation Reports. Service Acquisition Executives did not submit program deviation reports for five of the eight programs where program breaches were identified. Baseline breaches for three of the five programs were identified during quarterly DAES program assessments; that is, OSD action officers identified the baseline breaches from information provided by the Military Departments in their quarterly DAES reports. Although DoD Instruction 5000.50 clearly states that Service Acquisition Executives are to submit program deviation reports to the DAE within 45 days of the date that program managers declare baseline

breaches, the Instruction does not clearly state that program deviation reports are mandatory when baseline breaches are identified by others, such as OSD action officers. Without the program deviation reports, the DAE was not provided real-time information in the baseline process to stabilize programs through prompt attention to problems.

Benefits of Submitting Program Deviation Reports. The benefits of promptly submitting a program deviation report can be seen in the actions taken by the Acquisition Executives in response to a program breach reported on the Army's Mobile Subscriber Equipment program. Follow-on operational test and evaluation results showed that the equipment did not satisfy the baseline performance parameter for grade of service, that is, a 90-percent probability of call completion throughout the battlefield, given that 20 percent of the system subscribers were making calls at the same time. On November 4, 1988, the program manager reported the baseline breach to the Army Acquisition Executive in a program deviation report. In the program deviation report, the program manager stated that the Army's operational test organization could not determine the reasons why the equipment did not satisfy the grade of service requirement. The program manager proposed steps to resolve the problem, including performing a detailed analysis of data in the follow-on operational test and evaluation report, replicating in the factory the configuration of the equipment used in the follow-on test and evaluation, and conducting tactical verification of the grade of service.

On November 28, 1988, the Deputy Army Acquisition Executive established a five-member Review Panel to evaluate the program deviation report submitted on the Mobile Subscriber Equipment program. In its December 12, 1988, report, the Review Panel recommended that the grade of service requirement not be reduced but be retested during a field verification and operational evaluation in March 1990. On December 16, 1988, the Army Acquisition Executive submitted the program deviation report, the Review Panel's report, and a revised baseline agreement to the DAE. On February 7, 1989, the DAE, after reviewing the reports and the revised baseline, approved the Army's proposed plan for corrective action and the revised baseline agreement. Accordingly, the Acquisition Executives stabilized the Mobile Subscriber Equipment program through their prompt attention and actions to resolve the Equipment's grade of service problem. Appendix E contains a schedule of the major weapon systems with baseline breaches reviewed, the number of DAES exception reports that were submitted to the DAE, and the program deviation reports that were submitted to the DAE.

Conclusion. The process of reporting baseline breaches to the DAE through DAES exception reports and program deviation reports does keep the DAE apprised of problems affecting the programs and gives him an opportunity to stabilize the programs. In this regard, the Military Departments need to place greater emphasis on ensuring that program managers comply with the baseline breach reporting requirements in DoD Instruction 5000.50. Also, baseline breach reporting requirements in the DoD Instruction need to be clarified to ensure that program deviation reports are submitted when baseline breaches are identified by OSD action officers through their review of information provided by the Military Departments in their quarterly DAES reports.

RECOMMENDATIONS FOR CORRECTIVE ACTION

1. We recommend that the Service Acquisition Executives issue memorandums to their program managers reemphasizing the requirement to immediately submit a Defense Acquisition Executive Summary exception report when there is reasonable cause to believe that a program baseline breach will occur.

2. We recommend that the Navy Acquisition Executive submit to the Defense Acquisition Executive a program deviation report regarding the schedule and cost baseline breaches on the AN/BSY-2 Submarine Combat System.

3. We recommend that the Under Secretary of Defense for Acquisition clarify in the new DoD Manual 5000.2-M, "Defense Acquisition Management Documentation and Reports," the need for Service Acquisition Executives to submit program deviation reports to the Defense Acquisition Executive after being advised of program baseline breaches by OSD action officers through their quarterly Defense Acquisition Executive Summary program assessments.

MANAGEMENT COMMENTS

The Navy concurred with Recommendation 1. stating that it had promulgated to its major commands excerpts from draft DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," and DoD Manual 5000.2-M, "Defense Acquisition Management Documentation and Reports," which clarify and restate the requirements for DAES exception reports and program deviation reports.

The Air Force also concurred with Recommendation 1. stating that Addendum 1 to Air Force Acquisition Policy Memorandum 90M-008, "Policy Statement on Acquisition Program Baseline," November 12, 1990, emphasized program deviation report policy and directed compliance with DAES exception report and program deviation report reporting requirements established by the DAE.

The Navy concurred with Recommendation 2. stating that an AN/BSY-2 baseline change that addressed all stated baseline breaches was submitted to the DAE on January 16, 1991.

The Director, AP&PI, Office of the Under Secretary of Defense for Acquisition, partially concurred with the finding stating that DoD deviation reporting policy had been confusing and in some ways contradictory. Regardless, the Director emphasized that the DAE was apprised of a majority of the problems through quarterly DAES and Selected Acquisition Reports and that revised program baselines had been generated for programs with breaches. With respect to Recommendation 3., the Director stated that a discussion of program reporting and its relationship to the DAES exception report was included in the draft DoD Manual 5000.2-M, "Defense Acquisition Management Documentation and Reports."

AUDIT RESPONSE TO MANAGEMENT COMMENTS

Management comments were not responsive to the intent of Recommendation 3. As stated in the report, DoD Instruction 5000.50 clearly articulates requirements for reporting breaches through the submission of DAES exception reports and subsequent program deviation reports to the DAE. However, program managers were not complying with the stated requirements when actual program baseline breaches were identified by OSD action officers. Management's planned discussion of program reporting and its relationship to the DAES exception report in the draft DoD Manual 5000.2-M will not cause the Military Departments to submit program deviation reports as required by DoD Instruction 5000.50. We, therefore, request that the Director, AP&PI, reconsider his response to Recommendation 3. when responding to the final report.

AUDIT SAMPLE USED TO EVALUATE THE BASELINE PROCESS

Major Weapon System Program	Military Department
Development Stage	
Family of Heavy Tactical Vehicles/Palletized Load System (Palletized Load System)	Army
Family of Medium Tactical Vehicles (Medium Tactical Vehicles)	Army
AN/BSY-1 Submarine Combat System for the SSN-688 Class Nuclear Attack Submarine (BSY-1 Combat System)	Navy
AN/BSY-2 Submarine Combat System for the SSN-21 Class High Speed Nuclear Attack Submarine (BSY-2 Combat System)	Navy
Joint Surveillance and Target Attack Radar System (Joint STARS)	Air Force
Peacekeeper Advanced Basing (Rail Garrison)	Air Force
Production Stage	
Hellfire Missile	Army
Mobile Subscriber Equipment Communication System (Mobile Subscriber Equipment)	Army
Standard Missile 2 (Medium Range and Extended Range Surface-to-Air Missile)	Navy
Ultra-High Frequency Follow-on Communications Satellite System (UHF Follow-on Satellite)	Navy
Defense Meteorological Satellite Program (Defense Meteorological Satellite)	Air Force
Over-the-Horizon Backscatter Radar System (Over-the-Horizon Radar)	Air Force

AUDIT SAMPLING PLAN

The audit sample was constructed to achieve a valid representation of DoD's implementation of the baseline concept for major weapon system programs. Because of varying baseline requirements, we sampled major weapon system programs subject to baseline requirements in the development and production phases of the acquisition process. Using stratified random sampling techniques, we selected for review 12 of the 75 major weapon system programs in our audit universe. In each of the three Military Departments, we reviewed four major weapon systems being developed and acquired; six systems in the development stage and six systems in the production stage of the acquisition process.

MAJOR WEAPON SYSTEM PROGRAMS WITH CONTINGENTLY APPROVED BASELINE AGREEMENTS

NAVY

Below is a list of performance, cost, and schedule baseline description requirements that were still missing from program baseline agreements that the Defense Acquisition Executive contingently approved in February 1988.

Baseline Requirement*	Airborne Self-Protection Jammer	DDG-51 Guided Missile Destroyer	E-2C/Carrier Based All Weather Airborne Early Warning Command And Control System	F-14D Fighter	Harpoon/Standoff Land Attack Missile
Technical Parameters	Technical Parameters				
Unit Production Cost Goals	Unit Cost				
Schedule of Development Milestones	Initial Operational Capability Date				
Performance Description		Operational Parameters - number of missiles - number of missiles simultaneously engaged - detection and engagement ranges - sonar performance	Operational Parameters - time on station - radar detection ranges - system accuracy		Performance Parameters
Annual Production Delivery Schedules				Production Delivery Schedule	

MAJOR WEAPON SYSTEM PROGRAMS WITH CONTINGENTLY APPROVED BASELINE AGREEMENTS (continued)

AIR FORCE

Below is a list of performance, cost, and schedule baseline description requirements that were still missing from program baseline agreements that the Defense Acquisition Executive contingently approved in February 1988.

Baseline Requirement*	Defense Support Program	F-16 Multimission Fighter	Land Based Intercontinental Ballistic Missile	Low Altitude Navigation and Targeting Infrared System for Night	Tacit Rainbow
Total Development Costs					Total Production Costs
Unit Production Cost Goals					Unit Production Cost Goals
Schedule of Development Milestones					Completion of Developmental and Operational Testing
Performance Description			- Target Efficiency - Range - Flight Reliability - Countdown Reliability - Payload - Throw Weight	- Detectivity - Angular Resolution	
Schedule of Production Milestones		Production Milestones for C/D Models			
Total Procurement Costs			Cost in Then-Year Dollars		
Annual Production Delivery Schedules	Production Delivery Schedule	Production Delivery Schedule			
Total Military Construction Costs					Military Construction Dollars
Other Events			- Production Rate Information - Availability		

* Sources: DoD Directive 5000.45, "Baselining of Selected Major Systems," August 25, 1986.
Defense Acquisition Executive Baselining Guidance issued to the Military Departments in February 1988.

BASELINE PARAMETERS OMITTED FROM PROGRAM BASELINES REVIEWED

Below is a list of performance, cost, and schedule baseline description requirements that were omitted from baselines reviewed.

	Development Baselines		Production Baselines	
Baseline Requirements [1/] [2/]	Joint STARS - Air Force Program	Peacekeeper Advanced Basing (Rail Garrison)	Hellfire Missile (Upgrade Efforts)	Mobile Subscriber Equipment
- Key Performance Parameters	- Anti-jammimg Capability		- Warhead Penetration - Probability Strike Start Kill	
- Major Schedule Event:				
-- Major Test Events	- Ending Dates: -- Developmental Test and Evaluation -- Initial Operational Test and Evaluation	- Beginning Date of Initial Operational Test and Evaluation - Beginning and Ending Dates: -- Developmental Test and Evaluation -- Follow-on Test and Evaluation	- Beginning and Ending Dates -- Developmental Test and Evaluation	
- Other Significant Events:				
-- Initial Training and Provisioning				- Initial Training and Provisioning

BASELINE PARAMETERS OMITTED FROM PROGRAM BASELINES REVIEWED (continued)

Below is a list of performance, cost, and schedule baseline description requirements that were omitted from baselines reviewed.

Baseline Requirements 1/ 2/	Production Baselines		
	Standard Missile 2	Defense Meteorological Satellite	Over-the-Horizen Radar
- Key Performance Parameters	- Performance Requirements (Blocks III and IV)	- Mark IVB Terminal - Defensive Capabilities	
- Total Procurement Costs	- Procurement Costs (Blocks III and IV)		- Unfunded Cost for One Alaskan and Two Central U. S. Program Segments
- Major Schedule Events:			
-- Production Milestones	- Production Milestones IIIA and IIIB		
-- Major Test Events	- Beginning and End Dates: Follow-on Operational Test and Evaluation (Block III)	- Mark IVB Terminal Beginning and End Dates: -- Developmental Test and Evaluation -- Initial Operational Test and Evaluation	- Beginning and End Dates: -- Initial Operational Test and Evaluation -- Follow-on Test and Evaluation
-- Annual Production Deliveries	- Annual Production Delivery Schedules (Blocks III and IV)	- Delivery Schedules: -- Satellites 14 to 20 -- Primary Sensor, Satellite 16	
-- Initial Training and Provisioning	- Initial Training and Provisioning	- Initial Training and Provisioning	- Initial Training and Provisioning
-- Initial Operational Capability		- Initial Operational Capability - Initial Titan II Capability	
-- Full Operational Capability	- Full Operational Capability (Blocks III and IV)		- Full Operational Capability

1/ Sources: DoD Directive 5000.45, "Baselining of Selected Major Systems," August 25, 1986.
Defense Acquisition Executive Baselining Guidance issued to the Military Departments in February 1988.

2/ Source: U.S.C., title 10, section 2435, "Enhanced Program Stability," October 18, 1986.

BASELINE BREACH REPORTING FOR MAJOR WEAPON SYSTEM PROGRAMS IN OUR AUDIT SAMPLE

(July 1, 1988, to July 31, 1990)

Weapon System Program	Baseline Breaches		
	Number	Exception Reports Submitted	Program Deviation Reports Submitted
Army			
Mobile Subscriber Equipment	1	0	1
Medium Tactical Vehicles	2	0	1
Palletized Load System	1	0	0
Subtotal	4	0 [1]	2
Navy			
UHF Follow-on Satellite	1	1	1
BSY-1 Combat System [2]	1	0	0
BSY-2 Combat System [2]	2	0	0
Subtotal	4	1	1
Air Force			
Rail Garrison [2]	1	0	0
Over-The-Horizon Radar [2]	1	0	1
Subtotal	2	0	1
Total DoD	10 [3]	1	4

1/ The Army Acquisition Executive instructed program managers not to submit exception reports when breaches were identified.
2/ Baseline breach(es) were initially identified by an OSD action officer.
3/ Except for the BSY-2 Combat System baseline breaches, OSD was, or was being, provided data through the baseline process to resolve identified problems.

OFFICE OF THE UNDER SECRETARY OF DEFENSE

WASHINGTON, DC 20301-3000

ACQUISITION

AP&PI/ASM

February 1, 1991

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL

Final Report
Page No.

SUBJECT: Report on the Audit of the Use of the Baseline Concept in Managing Major Weapon System Acquisitions, Draft Audit Report

Thank you for the opportunity to comment on your draft audit report on the subject of acquisition program baselining. I have three general comments on the report. First, none of the findings in the report nor the general recommendations are new to us. All the problems with the baselining concept identified in the draft report are known to us and are being corrected in the revised DoDI 5000.2 and DoD 5000.2-M. Nowhere did the draft report highlight that the OUSD(A) staff found the problems identified in the audit prior to the issuance of the draft report and has taken corrective action.

Second, the audit report is much too loose with its estimation of the impact of some of the problems noted. For example, page 13 of the draft report states, "Without baseline agreements, the Acquisition Executives did not have the information needed in the baseline process to perform their acquisition oversight responsibilities." This statement is not true. The baseline is just one piece of the information needed for oversight. Oversight can still be accomplished, although not as effectively or as well, without a baseline. This type of sweeping language is present throughout the draft report. 7

Finally, in a number of instances, the draft report recommends that certain actions be taken which have been overcome by subsequent events, e.g, submission of program deviation reports for programs which have already been rebaselined following the deviation or addition of historical schedule dates. The baseline is a management tool. Those officials in the management decision chain are in the best position to know what information they need to manage or oversee a program. A drive to complete documentation for historical files does not achieve the purpose of using the baseline to assist in the management of weapon systems.

Comments on each finding and recommendation are at Tab A. Specific comments on the draft report language are annotated on a copy of the draft report at Tab B.

John D. Christie
Director, Acquisition Policy and
Program Integration

Attachment

Finding A: Establishing Baseline Agreements

The finding states that the DAE lacked information needed to enable him to fully use the baseline concept as a mechanism for controlling program instabilities and attendant cost growth because certain programs did not have baselines established and other programs were contingently approved in February 1988 pending the addition of specified parameters.

OUSD(A) response: Partially agree. A majority of the parameters which the USD(A) requested to be added to the baselines approved in February 1988 were already being reported against in the SAR and many were added to the DAES (e.g., procurement schedules). It is not accurate to say that the DAE lacked this information in most cases. In the creation of the CARS data base, OUSD(A)/AP&PI, in coordination with the Services, has reviewed all the parameters requested in February 1988 and has obtained information for all parameters still deemed relevant. This action implements the proposed recommendation for corrective action.

The USD(A) requested in his May 30, 1990, memorandum that the Services provide baselines for all programs which did not have approved program baselines. The Services have provided all but four baselines for review. OUSD(A)/AP&PI has provided comments to the Services and approval is pending incorporation of comments. Of the four programs which have not provided baselines (SRAM-T, Stingray, MLRS/TGW, and MILSTAR), all but MILSTAR are too undefined at this point to effectively baseline.

Finding B: Preparing Baseline Descriptions

The finding states that the DAE could not fully rely on the baseline process to promptly alert him of problems affecting major acquisition programs because DoD baseline guidance did not require that initial training and provisioning milestones be included in the baseline descriptions and because DoD baseline guidance prevented program managers from changing baseline descriptions for programs undergoing major upgrades after the full-scale production decision.

OUSD(A) response: Disagree. DoD Directive 5000.45 and the guidance issued by the USD(A) along with his approval of baselines in February 1988, which

supplemented DoD Directive 5000.45, both require the establishment of an initial operating capability (IOC) date. IOC is defined as the earliest date by which a system is provisioned and training is complete. This definition of IOC is accepted by the audit team (see page 19 of the draft report). Thus, initial training and provisioning milestone have been required in baselines by DoD baseline policy. The recommendation for corrective action would establish additional intermediate milestones for training and provisioning in the quarterly DAES. This option has always been open to the Program Manager -- specific parameters beyond the baseline are not specified in the DAES instruction but are encouraged. The revised DoD 5000.2-M (Part 16) includes more definitive language regarding the inclusion of training and provisioning intermediate milestones. A second recommendation is to invite the ASD(FM&P) to the quarterly DAES meetings. OUSD(A)/AP&PI has invited OASD(FM&P) personnel to attend the last eight DAES meetings. OASD(FM&P) personnel have attended five DAES meetings.

DoD Directive 5000.45 permits changes to baselines as a result of significant changes. Major upgrades would be a significant change. Further, DoD Directive 5000.1, dated September 1, 1987, includes a Milestone V as a major upgrade milestone decision point. Guidance provided by the USD(A) with the baselines approved in February 1988 provides for baseline updates at milestone decision points. A major upgrade done in accordance with DoDD 5000.1 would allow baseline updates. This policy is more clearly stated in the revised DoD 5000.2-M, implementing the recommended corrective action.

Finding C: Reporting Baseline Breaches

The finding states that the DAE was not being provided the information needed to stabilize programs through prompt attention to problems and initiation of appropriate corrective actions because Service Acquisition Executives were not always reporting baseline breaches to the DAE as required by DoD Instruction 5000.50.

OUSD(A) response: Partially agree. DoD deviation reporting policy has been confusing and in some ways contradictory. The use of the DAES exception report vice the program deviation report has not been clearly articulated. However, through regular DAES and SAR reporting, the USD(A) has been kept apprised of the majority of program problems, including program baseline breaches. Revised program baselines have

been generated for programs with breaches, reflecting programmatic changes approved by the milestone decision authority. The revised DoD 5000.2-M (Part 19) includes a discussion of program deviation reporting and its relationship to the DAES exception report. This action implements the recommended corrective action.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

In the following paragraphs, we are responding to management comments on the factual content of the report. Our responses are keyed to management's overview of our findings and recommendations and management comments on the three findings.

Management Overview.

Finding Problems. In general, we agree that problems with the baselining concept identified in the draft report were known by management. In Finding A., we acknowledged management efforts to obtain outstanding program baseline agreements and to amend baseline agreements that the Defense Acquisition Executive (DAE) contingently approved in February 1988. In Finding B., we acknowledged management efforts to obtain complete cost information in Air Force program baseline descriptions. Further, we noted in Part I of the report that OSD was including program baseline requirements in the draft DoD Instruction 5000.2, "Defense Acquisition Management Policies and Procedures," and in the draft DoD Manual 5000.2-M, "Defense Acquisition Management Documentation and Reports."

In reference to the new acquisition policy documents, the Director, Acquisition Policy and Program Integration, Office of the Under Secretary of Defense for Acquisition (USD[A]), issued policy memorandum "Acquisition Program Baseline Format," on October 18, 1990. Excerpts on DoD acquisition program baseline policy from the September 1990 drafts of DoD Instruction 5000.2 and DoD Manual 5000.2-M were attached to the memorandum. The memorandum directed the Military Departments to use these excerpts in preparing future program baselines pending publication of the new acquisition policy documents. The excerpts, as indicated in management's response, did correct some of the baseline problems identified in the draft report. In this respect, it was interesting to note that the excerpts contained many of our recommended corrective actions briefed to the Office of the USD(A) on September 11, 1990. The August 1990 drafts of the acquisition policy did not include our recommended corrective actions.

Impact of Problems. We agree that acquisition program information provided in the baseline process is just one piece of information used by the DAE for program oversight. However, other sources of program information, such as the quarterly Defense Acquisition Executive Summary (DAES) and the annual Selected Acquisition Reports (SAR's), do not provide the DAE real-time information for controlling program instabilities and attendant cost growth. In response to management concerns, we modified the report language to indicate that incomplete implementation of baseline policy and procedures resulted in the DAE and Service Acquisition Executives not having an acquisition management mechanism to enable real-time oversight.

Need for Corrective Actions. We disagree with management's contention that the draft report recommended certain actions that had been overcome by subsequent events. In the finding discussions and in the appendixes, we did describe the extent of the conditions identified during the stated audit scope. In reference to Findings A. and B., we confined our recommendations on baseline descriptions to relevant program baseline performance, cost, and schedule parameters that had not been overtaken by events; that is, system performance remained to be demonstrated through testing, total program costs remained to be determined, and scheduled events remained to be completed. In reference to Finding C., we did not recommend that the Military Departments submit program deviation reports for programs that had already been rebaselined following the deviation. In this regard, the draft report included the one recommendation for the Navy to submit a program deviation report for the AN/BSY-2 Submarine Combat System program. As of December 5, 1990, the Navy had neither submitted a program deviation report to the DAE regarding schedule and cost baseline breaches nor submitted a baseline change to the DAE for review and approval.

Finding A. Establishing Baseline Agreements.

Reporting of Parameters. We agree that many of the parameters that the DAE requested to be added to the baselines contingently approved in February 1988 were being reported in the DAES and the SAR's. However, placement of the parameters in these reports does not provide the DAE with a real-time mechanism for controlling program instabilities and attendant cost growth. Specifically, program managers are not required to submit DAES exception reports and program deviation reports when parameter breaches are anticipated to occur or had occurred unless the parameters are included in the approved program baseline. Accordingly, it is important that relevant parameters be included in baseline agreements to cause program managers to report acquisition problems when they are anticipated to occur or have occurred to enable the DAE to exercise real-time program oversight.

Finding B. Preparing Baseline Descriptions.

Initial Operating Capability. Management's comments did not recognize our concerns with using the initial operating capability event as a control mechanism to ensure that initial training and provisioning requirements were fulfilled by the initial operational capability event. Specifically, key dates associated with intermediate initial training and provisioning requirements to attain the initial operational capability were not required to be included in the baseline or the quarterly DAES reports. Key intermediate initial training and provisioning milestones were identified in the finding discussion. As shown in the finding, the DAE was not being provided information in the baseline process to monitor the completion of intermediate initial training and provisioning milestones to identify problems

early on and to initiate corrective actions, when necessary, to enable the initial operating capability requirement to be met. Management's plan to include more definitive language regarding the inclusion of initial training and provisioning intermediate milestones in the DAES report will help ensure that the DAE has information necessary to monitor the program manager's progress toward meeting the initial operational capability event.

Systems Undergoing Upgrade Efforts. Management comments did not address the problem identified in the finding, that is, the Military Departments were not submitting an approved baseline change, along with a Component milestone decision memorandum, to the DAE when decisions were made to proceed with upgrade efforts. DoD Directive 5000.1, "Major and Non-Major Defense Acquisition Programs," September 1, 1987, does provide for a Milestone V as a major upgrade milestone decision point. In reference to the upgrade efforts discussed in the finding, the Military Departments held the milestone reviews because the systems were Component-managed programs. As part of the milestone review process, the Military Departments did not require program managers to prepare baseline change documents. Consequently, approved program baseline agreements contained performance, cost, and schedule parameters that were no longer relevant for acquisition oversight.

DEPARTMENT OF THE ARMY
OFFICE OF THE ASSISTANT SECRETARY
WASHINGTON, DC 20310-0103

11 FEB 1991

SARD-DEP

Final Report
Page No.

MEMORANDUM FOR OFFICE OF THE INSPECTOR GENERAL,
DEPARTMENT OF DEFENSE

SUBJECT: Report on the Audit of the Use of the Baseline Concept in Managing Major Weapon System Acquisitions (Project No. 0AE-0042)

I appreciate the opportunity to comment on your draft audit report on the subject of acquisition program baselining. Upon review, there are some general comments as follows:

I feel it is important to note that the problems identified in your findings were not new. There were, in fact, known deficiencies at the time of your audit for which corrective actions had been initiated by OUSD(A) and the Services. Your report does not provide sufficient visibility on this point.

The report overstates the impact of some problems. For example, page 13 of the report implies that without baseline agreements the Acquisition Executives could not perform their oversight responsibilities. This statement is quite misleading. Acquisition Executives have other sources of information available in addition to the program baselines which enable them to perform their oversight responsibilities. For instance, in accordance with legislative direction, the Selected Acquisition Report (SAR) can serve as a baseline for management oversight pending establishment of an acquisition baseline agreement. The two Army systems which did not have approved acquisition baselines had established a baseline in the SAR. In addition, both systems were reporting monthly to the Army Acquisition Executive and quarterly to the Defense Acquisition Executive. Finally, baselines for both the Forward Area Air Defense Command, Control and Intelligence System and the Joint Tactical Fusion Program have been forwarded to OUSD(A) for approval in July 1990 and February 1991 respectively. 7

Your report states that baseline guidance precluded Program Managers from changing baseline descriptions for programs undergoing major upgrades. This statement is not entirely accurate. DoD Directive 5000.45 contained guidance

for updating and/or revising baselines if there were significant changes; however, we agree that the guidance was not clear on this point. The revised guidance in DoD Directive 5000.2 recently released has corrected the misconception. It incorporates a Milestone IV for major upgrades.

The report recommends that DoD Manual 5000.2M include a requirement for Program Managers to establish milestones for initial training and initial provisioning in the quarterly DAES reports for major systems in the production phase of acquisition. DoD Manual 5000.2M and DAES guidance contained in DoD Instruction 5000.50 include provisions for the inclusion of additional non-baseline milestones in DAES in order to provide a more complete understanding of a program's status. Additionally, any slippages or problem areas requiring attention are addressed as part of the DAES Format 10 assessments for Logistics Requirements and Objectives and/or Schedule as appropriate.

The report recommends that the Assistant Secretary of Defense (Force Management and Personnel) be invited to participate in the quarterly DAES process. ASD(FM&P) is currently an invited participant in the DAES process.

The report stated that the DAE was not informed of program baseline breaches because Program Managers failed to prepare DAES exception reports and program deviation reports when program breaches were anticipated. The report erroneously stated that Army guidance instructed Program Managers to disregard the requirement to submit DAES exception reports. No such direction has been given by Army. The DAES report provides early warning of potential problems and is not viewed by Army as a substitute for program deviation reports. Problem areas are highlighted in DAES. Once a determination of breach is made, detailed deviation reports are submitted to the DAE within 45 days as required. An example demonstrating Army's compliance follows:

The November 1988 DAES report for MSE informed the DAE that the performance parameter "90% Grade of Service with a 20% off hook factor" was not obtained during FOTE. The Program Manager subsequently prepared a deviation report addressing the baseline breach, which included more detailed information than required in an exception DAES. Since the issue was adequately addressed in the quarterly DAES submission and the deviation report, there was no need to submit a duplicative exception

DAES. Army conducted a management review of the MSE program. Final results of the management review were approved by the Army Acquisition Executive and submitted with the deviation report to OSD in December 1988 in accordance with legislative requirements. Thus, the DAE was informed of the situation from problem identification through final resolution.

My DAES and baseline points of contact are Mary Lou Krysick, 695-8545, and Barbara Decatur, 614-7186.

Stephen R. Burdt
Director for Program Evaluation

CF:
SAIG-PA
SARD-DER (Ms. Willey)

AUDIT RESPONSE TO MANAGEMENT COMMENTS

The Army's general comments parallel comments that we received from the Office of the Under Secretary of Defense for Acquisition. In our audit response to the Under Secretary's comments in Appendix F, we responded to the Army's general comments on finding problems, on impact of problems, on initial operating capability (initial training and initial provisioning), and on systems undergoing upgrade efforts. In the following paragraph, we are responding to the Army's comments on Finding C., Reporting Baseline Breaches.

Based on the Army's comments, we deleted the draft report paragraphs on Army guidance given to program managers pertaining to the submission of Defense Acquisition Executive Summary (DAES) exception reports to the Defense Acquisition Executive (DAE). In reference to baseline breach reporting, the Army's example on the Mobile Subscriber Equipment program reinforced the problem we identified of Army program managers not submitting DAES exception reports to the DAE when program breaches were anticipated to occur. Program office documentation, dated June and July 1988, showed that the performance factor "90-percent grade of service with a 20-percent off hook factor" was not being achieved in follow-on test and evaluation and was an issue of great concern. Although the program office was aware of the performance problem at that point, a DAES exception report was not submitted to the DAE, as required. As stated in the Army comments, the DAE was informed of the performance problem through the quarterly DAES report in November 1988 and the program deviation report dated November 4, 1988. As a result of the Army's comments, we modified the report to state that the three Army program managers did not submit DAES exception reports to the DAE, as required by DoD Instruction 5000.50, "Defense Acquisition Executive Summary (DAES)," because they did not understand, or overlooked, the criteria for reporting baseline breaches.

THE ASSISTANT SECRETARY OF THE NAVY
(Research, Development and Acquisition)
WASHINGTON, D.C. 20350-1000

FEB 14 1991

MEMORANDUM FOR THE DEPARTMENT OF DEFENSE ASSISTANT INSPECTOR GENERAL FOR AUDITING

Subj: DRAFT REPORT ON THE AUDIT OF THE USE OF THE BASELINE CONCEPT IN MANAGING MAJOR WEAPON SYSTEM ACQUISITIONS, (PROJECT NO. 0AE-0042)

Ref: (a) DODIG Memo of 5 December 1990

Encl: (1) Department of Navy comments

In accordance with reference (a), I have reviewed your draft audit report on acquisition program baselining and have several pertinent comments. First, all of the findings regarding the Navy have been previously addressed and corrected, therefore the final report should reflect these actions. The recommendations in the draft report for certain actions on specific Navy program baselines, have all been overtaken by subsequent events by either submission of deviation reports or a new baseline. Comments on specific program recommendations are attached at enclosure (1).

The findings in the draft report suggest that Navy submit program deviation reports and baseline revisions in order to complete old historical documentation of deviations and baseline changes. However, such an attempt would be unproductive and would not benefit management since these programs have already incorporated the necessary actions, revisions and deviations in the current baselines.

Additionally, the report cites problems in Navy baseline documents due to vague or non-existent OSD guidelines for the baselining concept and specific requirements to be addressed. These guidelines and requirements have all been reviewed and implemented by OSD in the revised DoDI 5000.2 and DoD 5000.2-M, and Navy is in full compliance with parameter requirements in their baseline documents.

The report also implies that the baseline is the sole and complete source of information for the decision authority. It should be remembered that the baseline is one factor. There are many other factors that are considered by management officials, such as the Test and Evaluation Master Plan, Cost and Operational Effectiveness Analysis, Operational Test and Evaluation Report, System Threat Assessment, and the Defense Acquisition Executive Summary report.

It is requested that the final report reflect the Navy's actions to correct the issues raised in this draft report.

Gerald A. Cann

Subj: DRAFT REPORT ON THE AUDIT OF THE USE OF THE BASELINE CONCEPT IN MANAGING MAJOR WEAPON SYSTEM ACQUISITIONS, (PROJECT NO. 0AE-0042)

Copy to:
NAVINSGEN
NAVCOMPT (NCB-53)

DEPARTMENT OF NAVY COMMENTS

FINDING A:

DODIG states that the Defense Acquisition Executive (DAE) lacked information needed to enable him to fully use the baseline concept as a mechanism for controlling program instabilities and attendant cost growth because Navy and Air Force did not submit for approval DAE requested additions to contingently approved baseline agreements. DODIG stated that the Navy and Air Force did not submit outstanding baseline agreements for those programs identified as not having a baseline.

Recommendation A-1:

DODIG recommends that the Navy Acquisition Executive (NAE) amend the contingently approved program baseline agreements by adding all relevant performance, schedule, and cost parameters to program baselines included in the new Consolidated Acquisition Reporting System (CARS) Data Base.

DON Position:

The discussion of this finding states that the DAE provided a contingent approval based on the Military Departments adding certain critical cost, schedule, and performance parameters to the baseline agreements. Further, the DAE stated that these additional parameters were deemed minimally necessary for meaningful baselines.

We disagree that the DAE did not have the required information because the baselines lacked critical parameters. The DAE was provided information needed for oversight of the programs through the Selected Acquisition Reports (SAR) and other documents. The necessary parameters were shown and provided when the baselines were generated using the new CARS automated system. The requirement that certain parameters be shown in the SAR, does not constitute the requirement that these parameters are relevant to the established, desired baseline document. Parameters are determined by the program managers, and approved by the management decision authority. These officials are well aware of the parameters and any other information that they require from the baseline agreements and other documentation to support the needed oversight and ultimate decisions on these various programs.

The Navy program, Harpoon/Standoff Land Attack Missile (SLAM) was specifically reviewed and mentioned in the audit as a program with a baseline that the DAE had approved with contingencies. The Navy is currently preparing the necessary revision to the Harpoon/SLAM baseline to incorporate the additional performance parameters that were requested. Also mentioned in the report were the Navy programs, SLAT, A-6E, ASPJ, and NATF. The Navy has submitted the required baselines for the SLAT, A-6E and ASPJ.

The NATF program has no milestones and the program has been zeroed, therefore there is no longer a requirement for a NATF baseline.

The DON position is that the Navy has already taken the necessary actions and has complied with this recommendation.

FINDING B:

DODIG states that some Navy baselines reviewed were incomplete because OSD baseline policy did not require that initial training and provisioning milestones be included in baseline descriptions for programs in the production stage, and that the OSD baseline policy prevented Navy baseline changes for programs undergoing major upgrades after the full-scale production decision. The Navy program, Standard Missile, was used as an example of a program undergoing a major upgrade.

Recommendation B-1:

DODIG recommends that USD(A) establish a requirement for program managers to establish milestones for initial training and initial provisioning in the quarterly DAES reports for major weapon system programs in the production phase of acquisition. DODIG further recommends that USD(A) establish a procedure to enable program managers to revise baselines for major weapon system programs undergoing major upgrades.

DON Position:

DoD guidance requires the establishment of an initial operating capability (IOC) date. IOC is defined as the earliest date a system is provisioned and training is complete. Therefore, by reflecting the IOC date in the Milestone section of the baseline document, Navy is in compliance with showing the initial training and provisioning milestone.

Navy also non-concurs in regard to the baseline changes for major upgrades being prevented. Baseline changes are allowed for when there are significant changes in programs. Major upgrades are considered significant changes. Further, Milestone V is a major upgrade milestone decision point and the baseline policy provides for baselines changes or updates at milestone decision points. Specifically, the Navy's Standard Missile program's baseline for Blocks III, IIIA, IIIB approved in November 1990, includes all the necessary parameters to support the major upgrade. Block IV baseline approval is pending operational testing results.

The DON position is that the Navy has already complied with the requirement that initial training and provisioning milestones be provided in the baseline document by reflecting the IOC milestone date. Also, Navy is in compliance with revising baselines for major upgrades and already shows these parameters and milestones in their associated baselines.

FINDING C:

DODIG states that the DAE was not being provided the information that was needed to stabilize programs through prompt attention to problems and initiation of appropriate corrective actions. Further, that baseline breaches were not always reported to the DAE. The Navy programs, BSY-1 and BSY-2, were mentioned specifically as programs not complying with the Program Deviation Report (PDR) requirements.

Recommendation C-1:

DODIG recommends that the Navy issue memorandums to their program managers reemphasizing the requirement to immediately submit a DAES exception report when there is a reasonable cause to believe that a program baseline breach will occur.

DON Position:

The DON position is that this requirement has been met with the issuance of excerpts to the DoDI 5000.2 and DoDI 5000.2M, which clarifies and restates the requirement for these reports.

Recommendation C-3:

DODIG recommends that the NAE submit to the DAE a program deviation report regarding the schedule and cost baseline breaches on the AN/BSY-2 Submarine Combat System program.

DON Position:

The DAE is given sufficient information and kept apprised of problems and breaches on all major defense programs through the use of the regular Defense Acquisition Executive Summary (DAES) reports, the SAR reports, and other various program reviews.

In the discussion of details, the DODIG specifically discusses the lack of reports and notification of deviations in the Navy's BSY-1 and BSY-2 programs. The BSY-1 program submitted a baseline change which incorporated the deviations and breaches addressed, and it was approved by the DAE on April 16, 1990. The BSY-2 program has submitted a baseline change to OSD which also addresses all stated breaches.

The DON position is that with the submission and approval of the BSY-1 new baseline, and the submission of the BSY-2 baseline, Navy has complied with this recommendation.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

The Navy's comments parallel comments that we received from the Office of the Under Secretary of Defense for Acquisition. In our audit response to the Under Secretary's comments in Appendix F, we responded to the Navy's comments on finding problems, on impact of problems, on reporting of parameters, on initial operating capability (initial training and initial provisioning), and on systems undergoing upgrade efforts.

DEPARTMENT OF THE AIR FORCE
WASHINGTON DC 20330-1000

OFFICE OF THE ASSISTANT SECRETARY

JAN 0 8 1991

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR AUDITING OFFICE OF THE INSPECTOR GENERAL DEPARTMENT OF DEFENSE

SUBJECT: Report on the Audit of the Use of the Baseline Concept in Managing Major Weapon System Acquisitions, Project No. OAE-0042 - INFORMATION MEMORANDUM

This is in reply to your memorandum for Assistant Secretary of the Air Force (Financial Management and Comptroller) requesting comments on the findings and recommendations made in subject report.

Request you consider the comments at Attachment 1 on the draft report prior to publishing the final report. As noted, some of the findings are incorrect and misleading; others are not relevant, having been resolved or corrected for a long time, including some which were corrected before the audit was conducted.

Focal point for Air Force APBs is Ms Kay Tarpley, SAF/AQXA, 695-5434.

Robert D. Englert

RODE[illegible], USAF
De[illegible]
(Mg. F[illegible])

1 Attachment
Comments

cc: SAF/FMABA

Final Report Page No.

a. Establishing Baseline Agreements.

(1) Finding. The audit report notes that the Air Force had not successfully amended all the Acquisition Program Baselines (APB) that the Defense Acquisition Executive (DAE) contingently approved in February 1988. While it can be found later in the report, it would be more objective if this same section would note that the Air Force did submit the requested information, i.e., draft APB amendments for F-15, DMSP, ATF, Tacit Rainbow, DSCS, MK-XV, KC-135, and LANTIRN. These submissions were returned without action, apparently due to a misunderstanding on the part of the OSD staff. The reason the inputs were rejected was not, as the draft audit report states on page 11, that the Air Force was attempting to change cost parameters that had not been breached. Therefore, at least for these programs, the Air Force should not be found to be noncompliant with the requirement to provide the requested information to the USD(A). The finding as stated is incorrect and misleading. 6

(2) Discussion of Details.

(a) Systems With Contingently Approved Baselines. See paragraph (1) above.

(b) Systems Without Baselines. We submitted the Small Intercontinental Ballistic Missile APB to the DAE on December 8, 1990. The SICBM did not have an approved APB in February 1988, because, as Dr Costello's memo states, the APB was deferred because the program was in danger of being deleted. It was in coordination at USD(A) in 1988 at that time.

b. Preparing Baseline Descriptions.

(1) Finding.

(a) The statement on page 15 of the report that "Air Force baseline guidance permitted program managers to include only one significant schedule event each year in baseline descriptions" and precluded them "from including total program production costs in baseline descriptions" is incorrect. The program managers did not have either restriction. The direction was to include at least one significant schedule event each year; this did not preclude the program manager from including multiple events for each year. Nor was the program manager precluded from including total program production costs--he or she merely was not required to include these under particular cases wherein those costs were beyond the control of the program manager. It should be noted that our current instructions require total production costs visibility. Further, we cannot agree with the statement on page 18 that the "Air Force's internal baseline guidance contributed to incomplete program baseline descriptions" on the basis that a program manager may have misinterpreted his instructions. 9 10

(b) Conclusion. The Director of Program Integration distributed excerpts from draft DoDD 5000.1, DoDI 5000.2, and DoD 5000.2M on October 18, 1990, and directed compliance pending publication of the above documents. We, in turn, amended our Acquisition Policy Memorandum 90M-008 on November 12, 1990, to include the mandatory schedule events. Request the last sentence in this paragraph, "In addition, the Air Force...the baselines.", be deleted from the final report.

(2) Recommendations for Corrective Actions. These actions were implemented in our November 12, 1990 Addendum to our Acquisition Policy Memorandum 90M-008, as stated in paragraph (b) above. Request you delete this finding and recommendation or at least refer to the completed action per our addendum.

c. **Reporting Baseline Breaches.**

(1) Recommendations. In our November 12, 1990 Addendum to 90M-008, we emphasized Program Deviation Report policy and directed compliance with the draft DoDD 5000.1, DoDI 5000.2, and DoD 5000.2M for breach reporting, as directed by the Director of Program Integration in his October 12, 1990 memorandum. Request you delete this recommendation for the Air Force or refer to our addendum.

d. **Audit Samples.**

(1) DSP. Program Manager has submitted an amended APB since February 1988, but for various reasons, it has not been approved by the AFAE for submittal to OSD. Another draft is in the process, and it includes the required data. The DSP is now a Component program and further approved APBs will be sent to the DAE for information only.

(2) F-16. Same as DSP.

(3) Land Based Intercontinental Ballistic Missile. We do not know what this program is. If it is the Small ICBM, then it was not contingently or otherwise approved in February 1988 and there was no notification of missing information at the time. There were therefore no missing parameters. We submitted the Small ICBM APB, which the AFAE signed on December 8, 1990, to the USD(A) on the same day.

(4) LANTIRN. We submitted an updated APB to the USD(A) incorporating the required information in May 1989. The Director of Program Integration returned it September 18, 1989, without considering the fulfillment of requested information. The AFAE is now reviewing an updated APB which also includes all the required information and we will submit it to the USD(A) upon the AFAE's approval.

(5) Tacit Rainbow. We submitted an updated APB to the USD(A) incorporating the required information in July 1989. The Director of Program Integration returned it September 18, 1989, without considering the fulfillment of requested information. We received further comments in January 1990 requesting resubmittal consistent to the FY91 President's Budget. The program has since been in a state of restructure, with a subsequent breach of the 1988 APB. After the program stabilizes, a revised APB will be submitted.

(6) JSTARS. Our revised policy addresses all omissions and subsequent APBs will contain the required information. The JSTARS program manager will submit a revised APB.

(7) Peacekeeper Rail Garrison. Same as above.

(8) DMSP. Same as above.

(9) OTH-B. Same as above.

e. **Breach Reporting Sample.** As stated above, our November 12, 1990, Addendum to Acquisition Policy Memorandum 90M-008 emphasizes the requirement for timely program deviation reporting.

(1) Peacekeeper Rail Garrison. The breach report is with the AFAE now. We acknowledge the late report. The report had been delayed until a new IOC could be established.

(2) Over-The-Horizon Radar. The AFAE reported a schedule and technical performance breach March 31, 1990 to the USD(A), so we believe this report is inaccurate.

AUDIT RESPONSE TO MANAGEMENT COMMENTS

In the following paragraphs, we are responding to management comments on the factual content of the report. Our responses are keyed to management comments on the three findings.

Finding A. Establishing Baseline Agreements.

Finding Paragraph. In the finding paragraph, we did not reference that the Air Force attempted in mid-1989 to amend two (LANTIRN and Tacit Rainbow) of the five Air Force baseline agreements that were contingently approved by the Defense Acquisition Executive (DAE) in February 1988 because the Air Force had not taken further actions to obtain DAE approval of changed baseline agreements. As of September 30, 1990, the Air Force had not resubmitted amended baseline agreements for the two programs since OSD returned them for rework.

In reference to the Air Force's comment on why the Office of the Under Secretary of Defense for Acquisition returned the eight amended baseline agreements, we cited the reason stated in the September 18, 1989, memorandum to the Secretary of the Air Force from the Office of the Under Secretary of Defense for Acquisition. The memorandum stated:

> I am returning to you the attached eight baselines. They appear to be annual updates based on the latest President's budget costs and do not appear to breach previously established thresholds.

Discussion of Details.

Systems Without Baselines. The Air Force comment on the status of the Small Intercontinental Ballistic Missile (Small ICBM) baseline as of February 1988 is correct. However, in a May 30, 1990, memorandum, the DAE directed the Air Force to submit the baseline agreement for the Small ICBM by June 15, 1990. In this regard, the draft report correctly stated that the Air Force was still in the process of establishing the required Small ICBM baseline agreement as of September 30, 1990. Our followup with OSD disclosed that the Air Force did submit the Small ICBM baseline agreement for review and approval on December 8, 1990, as stated in the Air Force comments.

Finding B. Preparing Baseline Agreements.

Finding Paragraph. The Air Force comments reinforce the problems we identified with the Air Force's baseline guidance. We agree that the Air Force's guidance did not restrict program managers from including multiple events each year in the baseline agreement. However, the audit clearly showed the need to clarify the guidance because Air Force program managers in our audit sample interpreted the guidance to mean that they were only

required to include one significant event each fiscal year in the baseline agreements. Although the Air Force guidance did not preclude program managers from including total program production costs in the baseline, it directed program managers to include only costs within the program manager's control, that is, costs included in the President's annual budget. Accordingly, program managers were only including production costs funded in the President's annual budget in the baselines.

Conclusion. We commend the Air Force for amending its baseline guidance on November 12, 1990, to require program managers to include mandatory events in program baseline agreements.

Appendix C. Audit Sample.

Land Based Intercontinental Ballistic Missile. Land Based Intercontinental Ballistic Missile is the official program designation given to the Peacekeeper Program in the Air Force Selected Acquisition Report. The DAE contingently approved the Peacekeeper baseline agreement on February 9, 1988. The DAE's approval was contingent on the Air Force adding nine relevant performance, cost, and schedule parameters to the baseline agreement. As of September 30, 1990, the Air Force had not added the nine relevant parameters to the baseline agreement.

Appendix E. Baseline Breach Reporting.

Over-the-Horizon Radar. We amended the report to show that the Air Force did submit a program deviation report to the DAE for the Over-the-Horizon Radar program.

SUMMARY OF POTENTIAL MONETARY AND OTHER BENEFITS RESULTING FROM THE AUDIT

Recommendation Reference	Description of Benefits	Amount and/or Type of Benefit
A.1.	Compliance with DoD direction. Amend Navy and Air Force program baseline agreements to comply with DoD direction.	Nonmonetary. Provides OSD data needed to exercise program oversight.
B.1.a.	Compliance with law. Enables OSD to oversee the Military Departments' progress in implementing initial training and provisioning requirements before weapon systems' initial operational capability dates.	Nonmonetary.
B.1.b.	Internal control. Provides OSD training officials a means of advising the Defense Acquisition Executive of initial training problems related to weapon system acquisitions.	Nonmonetary.
B.1.c.	Internal control. Provides the Defense Acquisition Executive data needed to oversee weapon system acquisition programs.	Nonmonetary.
B.2.	Compliance with DoD direction. Clarifies Air Force baseline guidance to ensure that program baseline descriptions comply with DoD direction.	Nonmonetary.
C.1.	Compliance with DoD direction. Emphasis by Service Acquisition Executives will help ensure that program managers submit exception reports to OSD as required.	Nonmonetary.

SUMMARY OF POTENTIAL MONETARY AND OTHER BENEFITS RESULTING FROM THE AUDIT (continued)

Recommendation Reference	Description of Benefits	Amount and/or Type of Benefit
C.2.	Compliance with DoD direction. Submission of the program deviation report will provide OSD the data needed to exercise acquisition oversight and to take appropriate corrective action.	Nonmonetary.
C.3.	Compliance with DoD direction. Clarification of the DoD guidance will help ensure that the Service Acquisition Executives submit program deviation reports within 45 days after the identification of a baseline breach.	Nonmonetary.

ACTIVITIES VISITED OR CONTACTED

Office of the Secretary of Defense

Office of the Under Secretary of Defense for Acquisition, Washington, DC
Office of the Assistant Secretary of Defense (Force Management and Personnel), Washington, DC
Office of the Assistant Secretary of Defense (Production and Logistics), Washington, DC
Office of the Assistant Secretary of Defense (Program Analysis and Evaluation), Washington, DC

Department of the Army

Office of the Assistant Secretary of the Army (Financial Management), Washington, DC
Office of the Assistant Secretary of the Army (Research, Development and Acquisition), Washington, DC
U.S. Army Communications-Electronics Command, Fort Monmouth, NJ
U.S. Army Missile Command, Huntsville, AL
U.S. Army Tank-Automotive Command, Warren, MI

Department of the Navy

Office of the Assistant Secretary of the Navy (Financial Management), Washington, DC
Office of the Assistant Secretary of the Navy (Research, Development and Acquisition), Washington, DC
Naval Sea Systems Command, Arlington, VA
Space and Naval Warfare Systems Command, Arlington, VA

Department of the Air Force

Office of the Assistant Secretary of the Air Force (Acquisition), Washington, DC
Office of the Assistant Secretary of the Air Force (Financial Management and Comptroller), Washington, DC
Air Force Ballistic Missile Organization, Norton Air Force Base, CA
Air Force Electronic Systems Division, Hanscom Field, MA
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