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United States Department of Defense

Acquisition of the Surface-Launched Advanced Medium Range Air-to-Air Missile

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Acronyms

AMRAAM	Advanced Medium-Range Air-to-Air Missile
CJCS	Chairman of the Joint Chiefs of Staff
CMDS	Cruise Missile Defense System
CPD	Capability Production Document
DCD	Director of Combat Developments
DCMA	Defense Contract Management Agency
DIACAP	DoD Information Assurance Certification and Accreditation Process
DITSCAP	DoD Information Technology Security Certification and Accreditation Process
IFCS	Integrated Fire Control Station
LOD	Letters of Delegation
LRIP	Low-Rate Initial Production
MOA	Memorandum of Agreement
SEP	System Engineering Plan
SEMP	System Engineering Management Plan
SLAMRAAM	Surface-Launched Advanced Medium-Range Air-to-Air Missile
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics

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

December 6, 2007

MEMORANDUM FOR DIRECTOR, DEFENSE CONTRACT MANAGEMENT AGENCY
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Report on the Acquisition of Surface-Launched Advanced Medium-Range Air-to-Air Missile (Report No. D-2008-032)

We are providing this report for review and comment. We considered management comments on a draft of this report when preparing the final report. This report addresses the Army's management of the Surface-Launched Advanced Medium-Range Air-to-Air Missile Program.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. The Acting Director, Defense Contract Management Agency nonconcurred with Recommendation C.2. Additionally, the Army Chief Information Officer did not respond to Recommendation D.1. and the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile did not respond to Recommendation D.2. Therefore we request that the Acting Director, Defense Contract Management Agency provide additional comments on Recommendation C.2. and that the Army Chief Information Officer and the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile provide comments on Recommendations D.1. and D.2. respectively by January 8, 2008.

If possible, please send management comments in electronic format (Adobe Acrobat file only) to AUDACM@dodig.mil. Copies of the management comments must contain the actual signature of the authorizing official. We cannot accept the / Signed / symbol in place of the actual signature. If you arrange to send classified comments electronically, they must be sent over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. Harold C. James at (703) 604-9088 (DSN 664-9088). See Appendix D for the report distribution. The team members are listed inside the back cover.

By direction of the Deputy Inspector General for Auditing:

Richard B. Jolliffe
Assistant Inspector General
Acquisition and Contract Management

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Department of Defense Office of Inspector General

Report No. D-2008-032 **December 6, 2007**
(Project No. D2007-D000AE-0060.000)

Acquisition of the Surface-Launched Advanced Medium-Range Air-to-Air Missile

Executive Summary

Who Should Read This Report and Why? Defense officials responsible for generating, processing, and approving acquisition requirements and managing weapon system acquisitions should read this report. This report discusses defining capability requirements, planning the systems engineering effort, defining responsibilities of the Defense Contract Management Agency (DCMA), and establishing information assurance requirements in support of the low-rate initial production decision for the Surface-Launched Advanced Medium-Range Air-to-Air Missile (SLAMRAAM).

Background. The SLAMRAAM is an air defense system the Army is developing to protect U.S. and friendly forces from aerial surveillance and air attack by cruise missiles, unmanned aerial vehicles, unmanned combat aerial vehicles, and rotary- and fixed-wing aircraft. The SLAMRAAM will provide the Army the means to prevent enemies from penetrating friendly forces, while freeing commanders to synchronize movement and firepower. The Army will employ the SLAMRAAM in units that are [redacted] As of July 2007, the program's funding to develop and procure the system totaled $622.5 million, with $208.3 million in research, development, test, and evaluation funds and $414.2 million for procurement of hardware (including 69 fire units, 35 integrated fire control stations, 55 Advanced Medium-Range Air-to-Air Missiles, and 30 sensor kits to be installed on the Sentinel Radar).

Results. We determined that the Army could have more cost effectively prepared the program for the low-rate initial production decision as evidenced by the need for the SLAMRAAM Program Office to rebaseline the development contract because of contractor technical difficulties and program funding shortfalls that resulted in increased contract costs. Specific areas needing management attention are discussed below.

The Director of Combat Developments, U.S. Army Air Defense Artillery School had not yet sufficiently defined capability requirements for the SLAMRAAM in the draft capability production document being prepared to support the low-rate initial production decision planned for FY 2010. Until the Director of Combat Developments adheres to policy for defining system capability requirements, the Army will be hindered in its ability to ensure that the SLAMRAAM satisfies essential warfighter capability requirements (finding A).

The Product Manager for SLAMRAAM began developing a systems engineering plan but did not use it to support its systems engineering management approach for the SLAMRAAM. Instead, the product manager was using the contractor-developed systems engineering management plan. By not using a systems engineering plan that

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included entrance and success criteria for planned technical reviews and defined the applied systems engineering processes, the product manager did not avail the program office with a system engineering management approach needed to cost effectively manage, develop, and integrate the system to fully meet program requirements (finding B).

The Commander, DCMA Space Sensors and Communications Operations, Raytheon Integrated Defense Systems, and the Project Manager, Cruise Missile Defense System established a memorandum of agreement for the SLAMRAAM program that did not reference current DCMA policy and fully establish links between the memorandum of agreement performance metrics and the project manager's desired outcomes. Additionally, the commander did not fully describe DCMA activities to support the SLAMRAAM program in the surveillance plan nor establish letters of delegation with other DCMA contract management offices for surveillance of all SLAMRAAM subcontractors. Until the commander and the project manager implement those actions, the commander will not be able to provide the project manager with the most informed recommendations regarding contractor progress towards attaining contract cost, schedule, and performance requirements (finding C).

The SLAMRAAM Product Office changed to an information assurance strategy that does not comply with issued and approved DoD information assurance requirements. Specifically, the product office, as directed, was following the DoD Information Assurance Certification and Accreditation Program guidance that was in coordination within DoD but not approved for implementation in DoD. The DoD Information Technology Security Certification and Accreditation Process remains the official DoD information assurance guidance. Until the DoD Information Assurance Certification and Accreditation Program guidance is properly coordinated and approved, the product office places the information contained in the SLAMRAAM system at greater risk of loss, misuse, unauthorized access, or modification (finding D).

The problems described in our findings resulted from material internal control weaknesses in the management of the SLAMRAAM. The Background section discusses these material internal control weaknesses.

Management Comments and Audit Response. We received comments from the Acting Director, Defense Contract Management Command; the Army Project Manager, Cruise Missile Defense System; and the Army Director of Combat Developments, U.S. Army Air Defense Artillery School. We did not receive comments from the Army Chief Information Officer.

The Acting Director, Defense Contract Management Agency and the Project Manager, Cruise Missile Defense System concurred with, or proposed actions meeting the intent of, recommendations for updating the memorandum of agreement between their organizations to reference current policy and guidance and to establish an annex linking performance metrics and standards to the customer-desired outcome for the SLAMRAAM. The Acting Director nonconcurred with making surveillance plans or activity annexes a mandatory part of the memorandums of agreement with acquisition program managers. He stated that the Defense Contract Management Agency would instead use strategies contained in the individual performance plans of functional specialists to ensure execution of activities to achieve performance commitments. The Army Project Manager, Cruise Missile Defense System concurred with revising the draft systems engineering plan to include entrance and success criteria for planned technical reviews and a full description of the systems engineering processes applied to the SLAMRAAM. The project manager did not provide comments on a recommendation to

return to following the DoD Information Technology Security Certification and Accreditation Process in developing the SLAMRAAM. Though not required to comment, the project manager concurred with revising the draft capability production document for the SLAMRAAM to establish measurable and testable capability requirements but nonconcurred with defining the * * as a key performance parameter. The Army Director of Combat Developments, U.S. Army Air Defense Artillery School concurred with revising the draft capability production document to define * * and to establish measurable and testable capability requirements.

In response to the Acting Director, Defense Contract Management Agency comments, we provided additional information concerning the advantages of including surveillance plans or activities annexes in memorandums of agreement with acquisition program managers. See the Findings Section of the report for a discussion of management comments on the recommendations and Appendix C for a discussion of management comments on the report.

Accordingly, we request that the Acting Director, Defense Contract Management Agency; the Army Chief Information Officer; and the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile comment on the final report by January 8, 2008.

* Freedom of Information Act Exemption Number 5, which includes internal advice, recommendations, and subjective evaluations, as stated in Army Regulation 25-55, "The Department of the Army Freedom of Information Act Program," November 1, 1997.

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Source: SLAMRAAM Product Office

Fire Unit With AMRAAMs, IFCS, Sentinel Radar, and IFCS Cockpit
(clockwise from top left)

Background

The Army Surface-Launched Advanced Medium-Range Air-to-Air Missile (SLAMRAAM) is a major system that is in the system development and demonstration phase of the acquisition process; a low-rate initial production (LRIP) decision is planned for FY 2010.

Mission and System Description. The SLAMRAAM is an air defense system that the Army is developing to protect U.S. and friendly forces from aerial surveillance and air attack by cruise missiles, unmanned aerial vehicles, unmanned combat aerial vehicles, and rotary- and fixed-wing aircraft. The SLAMRAAM will provide the Army with the means to prevent enemies from penetrating friendly forces, while freeing commanders to synchronize movement and firepower. The Army will employ the SLAMRAAM in units that are integrated in a netted and distributed architecture linked to other Army, interagency, joint, and multinational forces.

The SLAMRAAM includes four subsystems: the fire unit, the integrated fire control station (IFCS), the Advanced Medium-Range Air-to-Air Missile (AMRAAM), and the Sentinel Radar. The Product Manager for SLAMRAAM is developing the fire unit and the IFCS and integrating the AMRAAM and the Sentinel Radar into the SLAMRAAM as Government-furnished equipment.

- **Fire Unit.** The fire unit, a highly mobile and transportable launcher, will consist of a ready-to-fire missile load of [redacted] AIM-120 series AMRAAMs mounted on a high-mobility multipurpose wheeled vehicle. The fire unit will be manned by two combat-equipped soldiers.

- **IFCS.** The IFCS, which will perform battle management functions, consists of a shelter, with two workstations, mounted on a high-mobility multipurpose wheeled vehicle.

- **AMRAAM.** The SLAMRAAM will fire AIM-120 series AMRAAM missiles that are currently used in air-to-air combat engagements. The AMRAAM is a supersonic, guided missile that uses active radar target acquisition, proportional navigation guidance, and active target tracking.

- **Sentinel Radar.** [redacted]

The Army plans to incrementally replace Stinger-based air defense systems in inventory with SLAMRAAMs to provide an increased battlespace defense against cruise missiles, unmanned aerial vehicles, fixed-wing, and rotary-wing aircraft.

Program Management. The Product Manager for SLAMRAAM is developing the SLAMRAAM for the Project Manager, Cruise Missile Defense Systems (CMDS). The project manager is responsible for equipping the transformation of

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the existing maneuver air and missile defense capability into an integrated air and missile defense system of systems. In addition to SLAMRAAM, the following CMDS programs will be part of this system of systems: Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System, Stinger-Based Avenger and Man-Portable Air Defense System, and directed energy applications. The Army Acquisition Executive delegated the milestone decision authority responsibility for the SLAMRAAM Program to the Program Executive Officer, Air and Space Missile Defense,[1] on September 16, 2003.

Program Rebaseline. As a result of schedule delays, the Product Manager for SLAMRAAM is in the process of rebaselining and replanning the SLAMRAAM Program. In January 2006, the SLAMRAAM Program was scheduled for an LRIP decision in FY 2009, but the LRIP decision has now slipped to FY 2010. The SLAMRAAM staff stated that the factors causing the LRIP decision slip were contractor difficulties in following established engineering processes, Congress denying requests for additional funding in July and September 2006, and funding losses resulting from the U.S. Marine Corps leaving the SLAMRAAM Program in September 2006.

Funding and Contract Data. As of July 2007, the program's funding to develop and procure the system totaled $622.5 million, with $208.3 million in research, development, test, and evaluation funds and $414.2 million for procurement of hardware (including 69 fire units, 35 IFCSs, 55 AMRAAMs, and 30 sensor kits to be installed on the Sentinel Radar). The U.S. Army Aviation and Missile Command awarded a contract to Raytheon on February 26, 2004, for $127 million to develop the SLAMRAAM. Through November 2006, the Army increased the contract value to $181.8 million through 86 contract modifications.

Objectives

The audit objective was to evaluate the overall management of the Army SLAMRAAM Program. Because the program is in the system development and demonstration phase, we determined whether management was cost effectively preparing the program for the LRIP decision program review. We also evaluated the manager's internal controls as they related to the audit objectives. See Appendix A for a discussion of the audit scope and methodology.

Review of Internal Controls

We determined that material internal control weaknesses existed in the management of the SLAMRAAM, as defined by DoD Instruction 5010.40, "Managers' Internal Control (MIC) Program Procedures," January 4, 2006. The DoD 5000 series of guidance requires the product manager to exercise discretion

[1] In January 2005, Program Executive Office for Air, Space and Missile Defense merged with the Program Executive Office for Tactical Missiles to become the Program Executive Office for Missiles and Space.

and prudent business judgment in structuring a tailored, responsive, and innovative program. Planning the progression of SLAMRAAM from development into LRIP without having the user fully defining system capability requirements, completing system engineering planning requirements, efficiently and effectively using the program surveillance resources of the Defense Contract Management Agency (DCMA), and planning to use, as directed, unapproved information assurance guidance comprise less than prudent business practices. Implementing our recommendations will improve internal controls by ensuring that the Army more cost effectively and efficiently readies the SLAMRAAM program for LRIP. We will provide a copy of this report to the senior Army official responsible for internal controls in the Department of the Army.

A. Defining Capability Requirements

The Director of Combat Developments (DCD), U.S. Army Air Defense Artillery School had not yet sufficiently defined capability requirements for the SLAMRAAM in the draft capability production document (CPD) being prepared for Army staffing to support the LRIP decision program review planned for FY 2010. Specifically, the draft CPD did not identify system effectiveness as a key performance parameter, and did not fully define measurable and testable capability requirements for [redacted] The shortfalls in defining system capabilities in the draft CPD occurred because the DCD staff did not adhere to established Chairman of the Joint Chiefs of Staff (CJCS) policy for defining system capability requirements. Without CPD revision, the Army will be hindered in its ability to ensure that the SLAMRAAM satisfies essential warfighter capability requirements.

Policies, Procedures, and Guidance for Defining Capability Requirements

The DoD has established policies, procedures, and guidance for defining capability requirements for developing weapon systems.

Policies and Procedures. CJCS Instruction 3170.01F, "Joint Capabilities Integration and Development System," May 1, 2007, and CJCS Instruction 6212.01D, "Interoperability and Supportability of Information Technology and National Security Systems," March 8, 2006, establish DoD policies and procedures for defining system capability requirements through the Joint Capabilities Integration and Development System.

Guidance. CJCS Manual 3170.01C, "Operation of the Joint Capabilities Integration and Development System," May 1, 2007, provides guidance and procedures for implementing the Joint Capabilities Integration and Development System.

Defining Requirements in the Capability Production Document

As of July 2007, DCD was developing the draft "Capability Production Document for SLARMRAAM Increment I," (undated) for Army staffing to support the LRIP decision planned for FY 2010. As drafted, the CPD did not

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identify system effectiveness as a key performance parameter nor fully define measurable and testable capability requirements.

System Effectiveness as a Key Performance Parameter. The CJCS Manual 3170.01C states that key performance parameters are performance attributes of a system considered critical or essential to the development of an effective military capability and make a significant contribution to the key characteristics of the program. The manual states that failure to meet the threshold or minimum performance value of a key performance parameter may result in management revaluating the program or modifying production increments.

Although system effectiveness is essential to developing a military capability for SLAMRAAM, [redacted] These probabilities comprise:

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

During the audit, DCD staff stated that they intended for system effectiveness to be a key performance parameter but that the SLAMRAAM Product Office questioned this intention. DCD staff stated that the SLAMRAAM Product Office questioned establishing system effectiveness as a key performance parameter because SLAMRAAM system effectiveness was directly related to proven capabilities of the Government-furnished AMRAAM, which the product office had no influence over. [redacted]

[redacted]

Because system effectiveness is an extremely important performance attribute, the combined probability [redacted] which the product manager can influence, needs to be included as a key performance parameter in the CPD. The SLAMRAAM could fully meet all key performance parameters identified in the draft CPD, [redacted] and still be of little value, if it cannot meet system effectiveness requirements.

Measurable and Testable Capability Requirements. CJCS Instruction 3170.01F requires that the CPD define projected capabilities with sufficient accuracy to begin production. Additionally, the CJCS Manual 3170.01C states that the CPD should present performance attributes in measurable and testable terms. However, as drafted, the CPD did not contain measurable and testable requirements for portions of two key performance parameters and six other performance attributes that are identified in Appendix B. This condition occurred because the DCD staff did not adhere to guidance in the CJCS Manual 3170.01C for defining key performance parameters and performance attributes. DCD still has time to better define these capability requirements because it still has not forwarded the draft CPD to the U.S. Army Training and Doctrine Command for review. Appendix B provides descriptions of the key performance parameters and performance attributes that DCD needs to define in measurable and testable terms in the draft CPD.

Conclusion

Imprecisely defined capability requirements in the draft CPD would hinder the Army in its ability to ensure that the SLAMRAAM satisfies essential warfighter capability requirements before the LRIP decision. By identifying the probability of [redacted] as a key performance parameter, rather than a performance attribute, Army acquisition managers can increase the value given to system performance when making the LRIP program decision. Further, defining capability requirements in the CPD in measurable and testable terms will enable the Army to fully verify that the SLAMRAAM will provide the capabilities the warfighter needs before the LRIP program decision.

Management Comments on the Finding and Audit Response

Summaries of management comments on the finding and our response are in Appendix C.

Recommendation, Management Comments, and Audit Response

A. We recommend that the Director of Combat Developments, U.S. Army Air Defense Artillery School revise the draft capability production document for the Surface-Launched Advanced Medium-Range Air-to-Air Missile in accordance with policy in Chairman Joint Chiefs of Staff Instruction 3170.01F, "Joint Capabilities Integration and Development System," May 1, 2007, to define the probability of [redacted] as a key performance parameter; and to establish measurable and testable capability requirements for [redacted]

Director of Combat Developments Comments. The Director of Combat Developments, U.S. Army Air Defense Artillery School partially concurred, stating that implementing the recommendations would address the reported weaknesses in capability development. Specifically, the director concurred with revising the draft CPD to define the probabilities of [redacted] as a key performance parameter and to establish measurable and testable capability requirements for [redacted]. The director partially concurred with establishing measurable and testable capability requirements for [redacted] stating that the [redacted] in the draft CPD should include [redacted]

Audit Response. The director's planned revisions to the draft CPD are responsive to the recommendation.

Project Manager, Cruise Missile Defense System Comments. Although not required to comment, the Project Manager, CMDS stated that, while [redacted] do contribute to system effectiveness, they do not need to be a key performance parameter. The project manager stated that making [redacted] a key performance parameter would be of marginal value since the Army has not demonstrated the performance of these elements within a SLAMRAAM system. Thus, the project manager stated that system effectiveness should remain a performance attribute that the Army will quantify at the LRIP decision as end-to-end performance, including the sensor and missile performance. The project manager further stated that he agreed that the CPD should state all capability requirements in measurable, testable terms.

Audit Response. As we discuss in the finding, CJCS Manual 3170.01C states that key performance parameters are critical or essential performance attributes in the development of an effective military capability and significantly contribute to the key characteristics of a program. Because system effectiveness is essential to

developing a military capability for the SLAMRAAM, the project manager's statement that the performance of the [redacted] has not been demonstrated within a SLAMRAAM system does not support keeping systems effectiveness as a performance attribute. Instead, the project manager's comments could support an argument to make overall system effectiveness a key performance parameter, since the Army has not demonstrated the performance of the SLAMRAAM system.

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B. Planning for Systems Engineering

The Product Manager for SLAMRAAM was in the process of developing a systems engineering plan (SEP) to support its systems engineering management approach for SLAMRAAM. In the meantime, the product manager was using the contractor's systems engineering management plan (SEMP) that did not include key information needed to effectively manage the contractor's systems engineering efforts. Specifically, the SEMP did not define entrance and success criteria for planned technical reviews. Additionally, the SEMP did not fully define the systems engineering processes the product manager was applying. These conditions occurred because the product manager did not timely implement DoD guidance for developing a SEP to manage its systems engineering. As a result, the product manager did not avail the program office with a systems engineering management approach needed to cost effectively manage, develop, and integrate the system to fully meet program requirements.

Systems Engineering Policy and Guidance

Policy. DoD acquisition systems engineering policy is provided in DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003; DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003; and in two memorandums that the Under Secretary of Defense for Acquisition, Technology, and Logistics [USD(AT&L)] issued in 2004 to clarify systems engineering policy. The two policy memorandums are planned for inclusion in the next update of DoD Instruction 5000.2.

DoD Directive 5000.1. The directive requires that program managers apply a systems engineering approach that optimizes system performance and minimizes ownership costs to manage acquisition programs.

DoD Instruction 5000.2. The instruction emphasizes the requirement for using systems engineering to operate and support the system in the most cost-effective manner over its total life cycle. It states that the effective sustainment of weapon systems begins with the design and development of reliable and maintainable systems through the continuous application of a robust systems engineering methodology.

USD(ATL) Memorandum, "Policy for Systems Engineering in DoD," February 20, 2004. The memorandum requires that program managers for all acquisition programs develop a SEP integrated with the acquisition strategy for all milestone decisions. Specifically, the memorandum states that all programs, regardless of acquisition category, shall apply a robust systems engineering approach that balances total system performance and total ownership costs within the family-of-systems context. The SEP should describe the program's overall technical approach, applicable performance incentives, and success criteria for technical reviews.

USD(ATL) Memorandum, "Policy Addendum for Systems Engineering," October 22, 2004. The memorandum requires that the SEP contain event-driven, rather than schedule-driven, criteria for holding technical reviews that evaluate program progress. Specifically, the memorandum requires that program managers conduct technical reviews only when the system under development meets the review entrance criteria documented in the SEP.

Guidance. In addition to the above policy, the USD(AT&L) issued the guidance memorandum, "Implementing Systems Engineering Plans in DoD – Interim Guidance," March 30, 2004, to help program managers in preparing SEPs. The memorandum recommends that program managers establish the SEP early in the program's life cycle to guide all technical aspects of an acquisition program and then update the plan as the program progresses through the acquisition milestones. In addition, the memorandum states that the SEP supports program management by defining comprehensive Government and contractor systems engineering activities and responsibilities. The memorandum further states that the SEP describes the program's overall technical approach by defining the systems engineering processes, metrics, use of technical reviews, and criteria for successful technical reviews.

Developing the Systems Engineering Plan

Early during the audit, in November 2006, SLAMRAAM Product Office personnel stated they did not have a SEP to support the systems engineering process for the SLAMRAAM in accordance with USD(AT&L) guidance. The SLAMRAAM Product Office staff stated that while they had started working towards a SEP, they did not have a draft version of the SEP for us to review. In the meantime, the SLAMRAAM Product Office staff was using the contractor-developed "Surfaced Launched AMRAAM (SLAMRAAM) Systems Engineering Management Plan (SEMP)," October 10, 2005, to support the systems engineering process for the program. This SEMP did not fully meet the requirements of the SEP because it did not include key information that DoD systems engineering policy and guidance requires or encourages project managers to define. Specifically, the SEMP did not include event-driven entrance and success criteria for planned technical reviews, as required respectively by the October 22, 2004, and the February 20, 2004, USD(AT&L) policy memorandums. Additionally, the SEMP did not fully define systems engineering processes that the product manager was applying as specified in the March 2004 USD(AT&L) memorandum regarding the contents of the SEP. The limitations of the contractor-developed SEMP as compared to the requirements in the DoD policy and guidance are discussed below.

Technical Reviews. The SEMP did not define event-driven entrance and success criteria for planned technical reviews, including a system requirements review, a system design review, a critical design review, and a test readiness review. Technical reviews measure contractor progress toward attaining well-defined technical, cost, and schedule goals; assess system technical maturity and risk; and provide information to support program decisions. Including entrance and success criteria for the technical reviews specified in the SEMP would help the

product manager to better ensure that technical reviews are held only when program accomplishments make them warranted and meaningful in measuring program results.

Systems Engineering Process. The contractor-developed SEMP did not fully define all systems engineering processes applied to the SLAMRAAM. Specifically, the SEMP only identified the processes that the contractor initially planned to complete during the system development and demonstration phase of the acquisition process and the contractor had not updated it to implement the results of the completed engineering processes, such as the system requirements review. Prepared and validated as required, the product office SEP would have identified key systems engineering processes during the system development and demonstration phase, included updates based on completed technical reviews, and described how the systems engineering process would support the technical products of each acquisition phase.

Product Manager Actions Since November 2006

The SLAMRAAM Product Manager prepared a draft, "Surface Launched Advanced Medium Air-to-Air Missile System (SLAMRAAM) Systems Engineering Plan (SEP) Revision 0 Supporting Milestone C," that was dated June 18, 2007. As written, however, the draft SEP did not comply with USD(ATL) policy and guidelines because it did not include event-driven technical reviews, with entrance and success criteria and did not fully describe the systems engineering processes applied to the SLAMRAAM.

Factors Affecting Development of the SEP

Because the system development and demonstration decision for SLAMRAAM was held in September 2003 and pre-dated the February 2004 requirements to develop a SEP, the Product Manager, SLAMRAAM chose to rely on the contractor's SEMP to manage the systems engineering process. Since February 2004, the product manager did not respond to USD(AT&L) guidance issued in 2004 by timely and proactively establishing a SEP early in the program's life cycle to guide all technical aspects of the program.

Conclusion

As a result of not developing a SEP to manage systems engineering, the product manager did not avail the program office with a systems engineering management approach needed to cost effectively manage, develop, and integrate the system to fully meet program requirements. While the February 20, 2004, USD(AT&L) policy memorandum did not require the product manager to complete a SEP until the next acquisition milestone review (LRIP is planned in FY 2010 for SLAMRAAM), the March 30, 2004, guidance memorandum clearly explained the

benefits of preparing a SEP early in the program's life cycle. Specifically, a SEP would provide the product manager with a well-defined systems engineering process for the SLAMRAAM. In addition, a SEP would include event-driven technical reviews with defined entrance and success criteria, thus helping the product manager to more effectively manage the systems engineering process.

Management Comments on the Finding and Audit Response

Summaries of management comments on the finding and our response are in Appendix C.

Recommendation, Management Comments, and Audit Response

B. We recommend that the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile revise the draft systems engineering plan to establish a comprehensive systems engineering plan (in accordance with Under Secretary of Defense for Acquisition, Technology, and Logistics memorandums, "Policy for Systems Engineering in DoD," February 20, 2004; "Policy Addendum for Systems Engineering," October 22, 2004; and "Implementing Systems Engineering Plans in DoD – Interim Guidance," March 30, 2004) that includes planning for technical reviews that are event-driven, with entrance and success criteria, and fully describes the systems engineering processes applied to the Surface-Launched Advanced Medium-Range Air-to-Air Missile.

Management Comments. The Project Manager, Cruise Missile Defense System, responding for the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile, concurred. He stated that the SEP has been and will continue to be prepared in accordance with Under Secretary of Defense for Acquisition, Technology, and Logistics memorandums: "Policy for Systems Engineering in DoD," February 20, 2004; "Policy Addendum for Systems Engineering," October 22, 2004; and "Implementing Systems Engineering Plans in DoD – Interim Guidance," March 30, 2004.

Audit Response. The project manager's commitment to preparing the SEP in accordance with applicable policy and guidance is responsive to the recommendation.

C. Establishing Defense Contract Management Agency Support Responsibilities

The Commander, Defense Contract Management Agency (DCMA), Space Sensors and Communications Operations, Raytheon Integrated Defense Systems and the Project Manager, Cruise Missile Defense System (CMDS) did not adequately establish and document needed DCMA support in the memorandum of agreement (MOA) for the SLAMRAAM Program. Specifically, the MOA did not reference current DCMA policy and fully establish links between the MOA performance metrics and the project manager's desired outcomes for the SLAMRAAM Program. Additionally, the commander did not fully describe DCMA activities to support the SLAMRAAM Program in a surveillance plan and establish letters of delegation (LOD) with other DCMA contract management offices for surveillance at three of four SLAMRAAM subcontractors. These conditions occurred because the commander did not completely adhere to provisions in the Federal Acquisition Regulation, the DCMA Instruction, and the DCMA Guidebook for preparing an MOA, formulating a surveillance plan, and establishing LODs. As a result, DCMA did not have information needed to provide the project manager with the most informed recommendations regarding contractor progress toward attaining contract cost, schedule, and performance requirements.

Regulations and Guidance for Defense Contract Management Agency Support

Federal and DCMA regulations and guidance define the DCMA role in supporting the program manager's development of weapon systems.

Federal Acquisition Regulation. Federal Acquisition Regulation 42.302, "Contract Administration Functions," specifies the contract administration functions that Federal organizations normally delegate to contract administration offices. Those contract administration functions include program status reporting; assessing contractor compliance with contract terms; surveilling contractor engineering efforts and management systems; and reviewing and evaluating the contractor's logistic support, maintenance, and modification programs.

DCMA Policy and Guidance. The DCMA Instruction and Guidebook provide mandatory policy and guidance for performing the contract management functions listed in the Federal Acquisition Regulation. Specifically, they provide the DCMA staff with direction for performing outcome-based program management support for DoD acquisition programs, including direction for:

- establishing MOAs with program managers that focus on desired program outcomes,

- establishing surveillance plans detailing the tasks necessary to meet the provisions of the MOA, and

- establishing and managing program support teams led by program integrators to carry out the tasks documented in the surveillance plan.

Defense Contract Management Agency Support for SLAMRAAM

The DCMA provided the Project Manager, CMDS with program status reports in accordance with the May 2006 MOA. However, the commander and the project manager did not adequately establish and document needed DCMA support in the May 2006 MOA for the SLAMRAAM Program. Specifically, the MOA did not reference the current DCMA regulation and guidance or include required links between the MOA performance metrics and the project manager's desired program outcomes. Additionally, the commander did not fully describe DCMA activities to support the program in a surveillance plan and establish LODs with other contract management offices for surveillance at three subcontractors.

Preparing the Memorandum of Agreement. The approved "Memorandum of Agreement Between the Cruise Missile Defense Systems (CMDS) Project Office, Redstone Arsenal, AL and the DCMA Raytheon Integrated Defense Systems – Tewksbury and Andover, MA," May 1, 2006, did not conform to the DCMA Instruction. Specifically, the MOA referenced the expired One Book[2] rather than the current DCMA Instruction and DCMA Guidebook, and did not include an annex showing the cause-and-effect analysis that links each MOA performance metric and standard to the customer desired outcomes.

Applicable Policy and Guidance. On May 24, 2004, DCMA transitioned from the DCMA One Book to the DCMA Instruction and DCMA Guidebook for performing contract management functions. DCMA officials stated that the new DCMA program guidance allowed DCMA to implement performance-based management in accomplishing its program support function. The DCMA officials stated that performance-based management enables DCMA to more efficiently use limited resources to support program managers by establishing performance metrics and standards in the MOA to focus and measure DCMA's efforts in helping customers meet their desired outcomes. Accordingly, the commander and the project manager need to update the MOA to reference and apply the appropriate DCMA policy and guidance to more efficiently use resources in support of the SLAMRAAM Program.

Cause-and-Effect Analysis Annex. The DCMA Instruction requires MOAs to include an annex that documents a cause-and-effect analysis to link MOA performance metrics and standards to customer-desired outcomes. The MOA did not include a cause-and-effect analysis that linked performance metrics to customer-desired outcomes for the SLAMRAAM Program. As a result,

[2] The DCMA One Book that contained DCMA policy was cancelled in May 2004.

DCMA could better support the program manager by focusing its limited resources on performance metrics and standards to help the customer achieve its desired outcomes and enable the project manager to provide informed recommendations on contractor performance.

Describing Activities to Support Program. The DCMA Guidebook recommends that surveillance plans, as part of the MOA, prioritize DCMA support of an acquisition program, and identify what, when, where, and how the DCMA staff will support the program manager. The DCMA Instruction also recommends that the MOA include performance metrics, performance standards, and activities to support surveillance in activity annexes in the MOA. While the MOA contained performance metrics and activities needed to support DCMA surveillance, it did not prioritize DCMA efforts in support of the SLAMRAAM Program, include performance standards to implement the performance metrics, nor specify who was responsible for specific activities.

Actions to Improve the Quality of Surveillance Plans. To help DCMA contract management offices plan and track surveillance support activities, DCMA Headquarters was developing the Electronic Data Management System, a Web-based management tool that will link surveillance plan policies, processes, methods, standards, and controls to assure accountability, integration, and configuration control. DCMA staff stated that contract management offices will be required to use the Electronic Data Management System, but will be able to tailor the surveillance plan for their acquisition programs.

DCMA was developing and integrating the Electronic Data Management System in three phases. In the first phase, DCMA will store commitments, resource requirements, and program objective memorandum data. In the second phase, DCMA will distribute the application to contract management offices and refine deficiencies. In the third phase, DCMA headquarters will set policies, procedures, and controls for the integration of all management systems and databases. Further, DCMA will integrate the systems and databases to support contract management office surveillance of acquisition programs by including applications that record performance metrics, performance commitments, and activities. DCMA staff stated that implementation of the three phases will take at least 5 years.

Because full implementation of the Electronic Data Management System is at least 5 years away, DCMA plans to continue using surveillance plans or activity annexes as part of MOAs to describe surveillance activities to support acquisition programs. Although DCMA plans to require contract management offices to use the Electronic Data Management System to link surveillance activities for all acquisition programs supported under MOAs, DCMA did not establish a mandatory requirement for contract management offices to use surveillance plans or activity annexes in the interim. To ensure that program offices obtain needed contractor administration surveillance support, DCMA needs to require contract management offices to include a surveillance plan or activity annexes, tailored to the acquisition program supported, as part of all MOAs until the Electronic Data Management System is implemented. Without a tailored surveillance plan or activity annexes in the MOA, contract management offices cannot ensure that DCMA resources are used effectively to achieve customer-desired outcomes.

Establishing Letters of Delegation. The DCMA Instruction states that LODs will specify the administrative requirements, performance commitments, and support between DCMA contract management offices. The DCMA staff at Space Sensors and Communications Operations did not establish LODs to support the SLAMRAAM Product Manager with DCMA contract management offices located at or near three of the four SLAMRAAM subcontractor facilities.

- **Boeing Huntsville.** Boeing Huntsville developed the prototype IFCS. DCMA staff stated that the commander did not approve a draft LOD with DCMA, Boeing Huntsville because it was not written in customer-desired outcome terms. In February 2007, the DCMA Program Integrator for SLAMRAAM stated that Boeing had completed the current contract, as Boeing had delivered the five IFCS prototypes under contract. The original contract cost for developing the IFCS prototypes was $18.9 million and the actual cost was $31.5 million.

- **Raytheon Network Centric Systems.** Raytheon Network Centric Systems was developing the software for integration of the enhanced position location reporting system radio. DCMA staff stated that an LOD was not established with Raytheon Network Centric because the subcontractor was developing software for use on Government-furnished equipment. DCMA staff stated that Raytheon Network Centric Systems cost at completion was $4.2 million, but were unable to provide documentation to support this statement.

- **Thales Raytheon Systems.** Thales Raytheon Systems was developing software for integration of the Sentinel Radar as part of the SLAMRAAM. DCMA staff stated that an LOD was not established with Thales Raytheon Systems because the subcontractor was also developing software for use on Government-furnished equipment. DCMA stated that the cost at completion was $4.0 million, but were unable to provide documentation to support this statement.

With regard to the Boeing subcontract, the DCMA Program Integrator for SLAMRAAM stated that through an LOD she could have provided more complete reporting and analysis on the IFCS to the Project Manager, CMDS. Specifically, while a DCMA support program integrator at Boeing Huntsville stated that he provided the project manager with regular reports and analysis of Boeing's progress on the IFCS, he stated that, without an approved LOD, his reporting was informal and did not include earned value management cost and schedule analysis. Although the Raytheon subcontractors were working on Government-furnished equipment, they were developing the software for integration of the equipment in the SLAMRAAM Program. Therefore, we believe that the formalized reporting, to include earned value management, that the DCMA support program integrator at Boeing Huntsville could have provided

under an LOD would have given the project manager more meaningful information on the subcontractors' progress towards satisfying SLAMRAAM cost, schedule, and performance requirements.

The staff at DCMA Space Sensors and Communications Operations did establish an LOD with DCMA International Northern Europe to oversee the development of software by Kongsberg Defence and Aerospace. As a result, the DCMA Program Integrator for SLAMRAAM was kept up-to-date on Kongsberg Defence and Aerospace's cost, schedule, and performance against contract requirements.

Conclusion

Without a focused and comprehensive MOA, supported by a surveillance plan and LODs, DCMA staff were not in a position to provide the Project Manager, CMDS with the most timely and meaningful insights and recommendations regarding the contractor progress toward attaining cost, schedule, and performance contract requirements for SLAMRAAM. The project manager needs this information to make informed decisions concerning the SLAMRAAM Program.

Management Comments on the Finding and Audit Response

Summaries of management comments on the finding and our response are in Appendix C.

Recommendations, Management Comments, and Audit Response

C.1. We recommend that the Commander, Defense Contract Management Agency and the Project Manager, Cruise Missile Defense Systems revise the memorandum of agreement for the Surface-Launched Advanced Medium-Range Air-to-Air Missile to:

a. Reference the current Defense Contract Management Agency Instruction and Defense Contract Management Agency Guidebook; and

b. Include an annex that documents a cause-and-effect analysis linking Defense Contract Management Agency performance metrics and standards to the customer-desired outcome, in accordance with the Defense Contract Management Agency Instruction.

Defense Contract Management Agency Comments. The Acting Director, Defense Contract Management Agency responding for the Commander, concurred. He stated that DCMA, Space Sensors and Communications

Operations, Raytheon Integrated Defense Systems was updating the MOA in accordance with the current agency guidelines and instructions. The acting director estimated that the MOA would be updated and completed by the first quarter of FY 2008.

Army Comments. The Project Manager, Cruise Missile Defense System, responding for the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile, concurred, stating that CMDS and DCMA were establishing a new MOA, based on 2007 DCMA guidance, which will reflect the more recent changes DCMA has made to the performance-based management process since the MOA was issued in May 2006.

Audit Response. The acting director's and project manager's plans to establish an updated MOA, based on current DCMA guidelines and instructions, are responsive to the recommendation.

C.2. We recommend that the Acting Director, Defense Contract Management Agency update the Defense Contract Management Agency Instruction to require that memorandums of agreement with acquisition program managers to include surveillance plans or activity annexes that prioritize Defense Contract Management Agency support; performance metrics and standards; and identify what, when, where, and how the Defense Contract Management Agency staff provides surveillance until the Electronic Data Management System is completed.

Management Comments. The Acting Director, Defense Contract Management Agency nonconcurred. He stated that DCMA policy does not require the inclusion of the performance commitment strategy (surveillance plan) in the MOAs they execute with their customers, because their commitment is not to the activities that make up the strategy, but to the results noted in the body of the MOA. He stated that, if DCMA made the inclusion of Annex E mandatory, then DCMA would be committed not only to the desired results, but to a strategy that may need to change, if analysis shows that progress toward the desired results was not satisfactory. He stated that, while the inclusion of Annex E is not mandatory in the MOA, DCMA does require that contract management offices execute strategies to achieve their performance commitments. Therefore, he stated that DCMA chose to use strategies contained in the individual performance plans of its functional specialists to ensure execution of the activities needed to achieve performance commitments. By documenting the strategies in this fashion, the acting director stated that DCMA makes execution a direct linkage between the organizational performance commitments and the factors that determine performance of the DCMA workforce. He stated that this linkage of organizational and individual performance makes the DCMA's performance-based management approach focused on appropriate priorities and "self-governing."

Audit Response. The acting director's comments did not adequately address the recommendation. The use of surveillance plans or activity annexes offers significant advantages over using the strategies contained in the individual performance plans of the functional specialists to ensure that the specialists execute the activities needed to achieve performance commitments. The

surveillance plan, or activities annex, enhances the MOA by providing an overall consolidated strategy for the DCMA program integration staff, including functional specialists, to follow in performing required support functions. Conversely, using the individual performance plans of functional specialists fragments strategies into the contributions of individual functional specialists. As a further complication, individual functional specialists often support multiple acquisition programs, each with a different MOA containing tailored performance commitments. Additionally, if analysis shows that program progress toward the desired results is not satisfactory and strategy changes are needed, the DCMA would have to change multiple individual performance plans, versus one surveillance plan or activity annex. In summary, using the surveillance plan or activity annex as part of the MOA provides the DCMA Program Integrator with a more efficient means for ensuring that functional specialists perform necessary activities to meet commitments to acquisition program managers. As an additional consideration, the acting director's comments to the above recommendation are not consistent with his comments on a recommendation in another recent DoD Inspector General Report. Specifically, in DoD Inspector General Report No. D-2007-084, "Acquisition of the Navy Rapid Airborne Mine Clearance System," April 11, 2007, the acting director concurred with a recommendation to establish a surveillance plan for the Rapid Airborne Mine Clearance System Program. Accordingly, we request that the acting director reconsider his position and provide comments in response to the final report.

C.3. We recommend that the Commander, Defense Contract Management Agency, Space Sensors and Communications Operations, Raytheon Integrated Defense Systems establish letters of delegation with supporting Defense Contract Management Agency contract management offices for subcontractor surveillance at Raytheon Network Centric Systems and Thales Raytheon Systems subcontractors, in accordance with the Defense Contract Management Agency Instruction.

Management Comments. The Acting Director, Defense Contract Management Agency partially concurred, stating that DCMA Raytheon Integrated Defense Systems will establish an LOD at Thales Raytheon Systems to support the upcoming software qualification testing. He stated that the software qualification testing at Thales was currently delayed, based on the late delivery of Government-furnished equipment but will be completed before the end of the second quarter FY 2008. He further stated that Raytheon Network Centric Systems had completed work and that any future delegations would be limited to rework or repair of the items delivered to Raytheon Integrated Defense Systems. Therefore, he concluded that a formal delegation for Raytheon Net Centric Systems was not necessary or cost effective.

Audit Response. The acting director's commitment to establish an LOD at Thales Raytheon Systems, the remaining active subcontractor, was responsive to the recommendation.

D. Implementing Information Assurance Guidance

The SLAMRAAM Product Office changed to an information assurance strategy that does not comply with issued and approved DoD information assurance requirements. Specifically, the product office, at the direction of the U.S. Army Chief Information Officer, began following the unapproved DoD Information Assurance Certification and Accreditation Process (DIACAP) guidance that was in coordination within DoD, but not approved for implementation. The DoD Information Technology Security Certification and Accreditation Process (DITSCAP) remains the official DoD information assurance guidance. This occurred because the Assistant Secretary of Defense for Networks and Information Integration/DoD Chief Information Officer issued interim information assurance guidance, DIACAP, before proper coordination and review by the Director, Administration and Management, Office of the Secretary of Defense. The Army Chief Information Officer then directed the product office to follow this interim information assurance guidance. Until the DIACAP guidance is properly coordinated and reviewed, the product office places the information contained in the SLAMRAAM system at greater risk of loss, misuse, or unauthorized access to or modification of the information contained in the system.

Information Assurance Policy

DoD Directive 5025.1. DoD Directive 5025.1, "DoD Directives System," July 14, 2004, provides policy and responsibilities governing DoD directives, instructions, and publications. The directive requires the Director, Administration and Management to review and coordinate DoD issuances.

DoD Instruction 5200.40. DoD Instruction 5200.40, "DoD Information Technology Security Certification and Accreditation Process (DITSCAP)," December 30, 1997, requires the heads of the DoD Components to implement the DITSCAP for security certification and accreditation of DoD Components and DoD contractor information technology systems and networks.

Information Assurance Requirements

While the SLAMRAAM Product Office did have an information assurance strategy and a contract statement of work that specified the contractor using DITSCAP for the information assurance requirements as mandated in DoD Instruction 5200.40, the SLAMRAAM Product Office changed this strategy. SLAMRAAM information assurance personnel stated that the Army Chief Information Officer directed them to use the interim DIACAP guidance to certify and accredit the information system portion of the SLAMRAAM Program.

Properly Coordinating Interim Guidance

In directing the SLAMRAAM Product Office to use interim DIACAP guidance, the Army Chief Information Officer reacted to an interim guidance memorandum from the DoD Chief Information Officer. Specifically, on July 6, 2006, the Assistant Secretary of Defense for Networks and Information Integration/DoD Chief Information Officer issued the memorandum, "Interim Department of Defense (DoD) Information Assurance (IA) Certification and Accreditation (C&A) Process Guidance," that established interim guidance, including a draft instruction, for the DIACAP. Although proper coordination and review by the Director, Administration and Management had not occurred, the Assistant Secretary stated that the interim guidance superseded the DITSCAP and established procedures for information assurance certification and accreditation of DoD information systems to identify, design, test, and monitor information assurance capabilities and services.

DoD Directive 5025.1 requires proposed DoD issuances and cancellations to be formally coordinated with heads of DoD Components to solicit their views. In addition, the directive requires issuances to be coordinated with the DoD General Counsel; the Inspector General, DoD; and reviewed by the Director, Administration and Management. On August 2, 2006, a representative for the Washington Headquarters Services sent an e-mail to the Office of the Assistant Secretary of Defense for Networks and Information Integration stating that the DIACAP interim guidance could not supersede the DITSCAP guidance because the Office of the Assistant Secretary did not properly coordinate the interim guidance in accordance with DoD Directive 5025.1.

As part of the coordination process under DoD Directive 5025.1, the DoD Office of Inspector General nonconcurred with the April 2006 version of the DIACAP interim guidance and draft instructions. In DoD Inspector General memorandum, "Coordination of Draft DoD Instruction 8510.bb, DoD Information Assurance Certification and Accreditation Process (DIACAP)," May 25, 2007, the Principal Deputy Inspector General listed 15 comments, which provided the basis for the nonconcurrance. The DoD Directive further states that concerned parties should resolve nonconcurrances before approving and publishing an issuance. Key among the 15 comments that the DoD Inspector General provided were that the draft instruction did not:

- include specific benchmarks or criteria for certifying and accrediting DoD compliance with the statutory requirements of the Chief Financial Officer's Act and the Federal Information Security Management Act,

- include DoD contractors and agents within its applicability and scope, nor

- establish a configuration control and management process to guide DoD implementation of the instruction.

According to a representative from Washington Headquarters Services, until the DIACAP interim guidance and the proposed draft instruction are coordinated and reviewed by the Director, Administration and Management, the DITSCAP remains the official DoD information assurance certification and accreditation policy.

Effect of Improper Information Assurance Guidance

The improperly issued interim DoD information assurance guidance caused the Army Chief Information Officer to improperly issue his own direction to follow DIACAP guidance in preparing the SLAMRAAM Program for the LRIP decision program review. In addition, issuance of DIACAP guidance before proper coordination, review, and implementation could place systems, such as SLAMRAAM, at a greater risk of loss, misuse, or unauthorized access to or modification of the information contained in the systems.

We reported a similar problem with premature implementation of DIACAP in DoD Inspector General Report No. D2007-103, "Air Force KC-X Aerial Refueling Tanker Aircraft Program," May 30, 2007. The report recommended that:

> The Director, Administration and Management, according to his authority, and in coordination with the Assistant Secretary of Defense for Networks and Information Integration/DoD Chief Information Officer issue formal authoritative information assurance policy in accordance with DoD Directive 5025.1, "DoD Directives System," July 14, 2004, or issue guidance to the Air Force regarding applicable information assurance certification and accreditation processes for inclusion in its KC-X contractual documents.

The Director, Administration and Management provided comments to the final report stating that the Director, Administration and Management does not have the authority to issue policy or guidance on information assurance. The DoD official with the responsibility and authority to issue information assurance policy and guidance is the Assistant Secretary of Defense for Networks and Information Integration/DoD Chief Information Officer. Until the Assistant Secretary properly coordinates new DoD-wide policy and guidance that cancels DoD Instruction 5200.40 and DoD Manual 8510.l-M, "Department of Defense Information Technology Security Certification and Accreditation Process (DITSCAP) Application Manual," July 31, 2000, the Director stated that DITSCAP still constitutes the official DoD information assurance policy.

Conclusion

To ensure consistent information assurance certification and accreditation guidance within DoD, the Director, Administration and Management must "review and coordinate all DoD issuances." Further, the Assistant Secretary of Defense of Networks and Information Integration/DoD Chief Information Officer

must submit any information assurance guidance that has the effect of canceling DoD issuances to the Director, Administration and Management for coordination and review.

Since the Director, Administration and Management must coordinate and review any official DoD information assurance certification and accreditation policy that has the effect of canceling DoD issuance, the SLAMRAAM Product Office should not follow the interim DIACAP guidance instead of DITSCAP.

Recommendations

D.1. We recommend that the Army Chief Information Officer rescind all verbal or written direction given to Army acquisition program managers to follow the interim guidance on DoD Information Assurance Certification and Accreditation Program in developing weapon systems.

Management Comments Required. The Army Chief Information Officer did not provide comments on the recommendation. We request that the Army Chief Information Officer provide comments on the final report.

D.2. We recommend that the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile return to following the DoD Information Technology Security Certification and Accreditation Process in developing the Surface-Launched Advanced Medium-Range Air-to-Air Missile, as documented in the information assurance strategy and in accordance with DoD Instruction 5200.40, "DoD Information Technology Security Certification and Accreditation Process (DITSCAP)," December 30, 1997.

Management Comments Required. The product manager did not provide comments on the recommendation. We request that the product manager provide comments on the final report.

Appendix A. Scope and Methodology

We conducted this performance audit in accordance with generally accepted government auditing standards from October 2006 through August 2007. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

During the audit, we evaluated whether management was cost effectively developing and readying the program for the low-rate initial production phase of the acquisition process. We reviewed requirements and capabilities, testing, systems engineering, contracting, acquisition strategy, and funding documents dated from May 1999 through June 2007. We interviewed staff from offices of the Director, Operational Test and Evaluation; the Army Director of Combat Development; the Project Manager, Cruise Missile Defense Systems; the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile; the Commander, Army Test and Evaluation Command; and the Director, Defense Contract Management Agency.

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

Use of Technical Assistance. An electrical engineer and a computer engineer from the Electronics Engineering and Information Technology Branches, Technical Assessment Directorate of Policy and Oversight, Department of Defense Office of Inspector General assisted in the audit. The engineers evaluated and reviewed systems engineering, software, and other acquisition planning-related documents in the SLAMRAAM Program.

Government Accountability Office High-Risk Area. The Government Accountability Office has identified several high-risk areas in DoD. This report provides coverage of the "DoD Weapons Systems Acquisition" high-risk area.

Prior Coverage

No prior coverage has been conducted on the overall management of the SLAMRAAM Program during the last 5 years.

Appendix B. Measurable and Testable Capability Requirements

The Chairman of the Joint Chiefs of Staff (CJCS) Manual 3170.01C states that the capability production document (CPD) should define each performance attribute in measurable and testable terms. However, as drafted, the CPD did not contain measurable and testable requirements for two key performance parameters and six other performance attributes as discussed below.

Key Performance Parameters

Net-Ready. CJCS Instruction 6212.01D requires CPDs to include 16 integrated architecture products that provide operational, system, and technical standard views that describe the system and its interfaces with external systems. The CJCS Instruction states that the descriptions of architecture products are an element of the net-ready key performance parameter and that sponsors use this key performance parameter to define system characteristics and key performance metrics for the timely, accurate, and complete exchange of information. However, the draft CPD did not contain architectural product descriptions to support the net-ready key performance parameter. The following table lists the descriptions of the architecture products, which CJCS Instruction 6212.01D requires program sponsors to include in CPDs.

Description of Architecture Products

Framework Products	Framework Product Name	General Description
AV-1	Overview and Summary Information	Scope, purpose, intended users, environment depicted, and analytical findings.
OV-1	High-Level Operational Concept Graphic	High-level graphical/textual description of operational concept.
OV-2	Operational Node Connectivity Description	Operational nodes, operational activities performed at each node, connectivity, and information exchange lines between nodes.
OV-3	Operational Information Exchange Matrix	Information exchanged between nodes and the relevant attributes of that exchange.
OV-4	Organizational Relationships Chart	Organizational role or other relationships among organizations.
OV-5	Operational Activity Model	Operational activities, relationships among activities, inputs, and outputs.
OV-6c	Operational Event-Trace Description	One of three products used to describe operational activity sequence and timing—traces actions in a scenario or sequence of events and specifies timing of events.
OV-7	Logical Data Model	System data requirements and structural business process rules of the operational view.
SV-1	System Interface Description	Identification of systems nodes, systems, and system items and their interconnections, within and between nodes.

Description of Architecture Products (Continued)

SV-2	System Communications Description	Systems nodes and their related communications lay-downs.
SV-4	System Functionality Description	Functions performed by systems and the information flow among system functions, including information assurance functions.
SV-5	Operational Activity to Systems Function Traceability Matrix	Mapping of systems back to operational capabilities or of system functions back to operational activities.
SV-6	Systems Data Exchange	Provides details of systems data being exchanged.
SV-11	Physical Schema	Physical implementation of Logical Data Model entities; for example, message format, file structures, and physical schema.
TV-1	Technical Standards Profile	Extraction of standards that apply to the given architecture, including information assurance functions.
TV-2	Technical Standards Forecast	Emerging standards that are not currently approved. The TV-2 should also be used to document technical issues affecting program implementation.

According to DCD staff, they were working to develop the above architectural products but had not included them in the draft CPD. The DCD staff stated that they planned to include the architectural views in an updated draft of the CPD.

[redacted]

Other Performance Attributes

[redacted]

b(3)

b(3)

b(3)

Appendix C. Audit Response to Management Comments on the Report

Our detailed responses to the comments from the Project Manager, Cruise Missile Defense System and the Acting Director, Defense Contract Management Agency on statements in the draft report follow. The complete text of the management comments is in the Management Comments section of this report.

Project Manager, Cruise Missile Defense Systems Comments and Audit Response

Management Comments. The project manager provided comments on the "Background" section of the report, as well as on Findings A, B, and C.

Background. The project manager stated that the draft report incorrectly asserted that factors causing the program rebaselining and associated cost increase included the Army not sufficiently defining capability requirements in the operational requirements document used to develop the draft capability production document (CPD), contractor difficulties in understanding and allocating system requirements to subcontractors, and the DCMA Commander not completely adhering to policy and guidance. The project manager stated that there is no evidence to support any correlation between these factors and the need to rebaseline the SLAMRAAM Program. The project manager asserted that the rebaseline occurred because of the following: the contractor failed to follow established engineering processes, Congress denied Army requests during 2006 for additional funding to cover contractor overruns, and the Marine Corps withdrew from the program in 2006.

Audit Response. We revised the "Background" section to state that engineering and funding problems, along with the Marine Corps withdrawing from the program, were the primary reasons for the program rebaseline. However, we also believe that the Army's shortfalls in defining capability requirements in the operational requirements document, contractor difficulties in allocating system requirements to subcontractors, and the DCMA Commander not adhering to policy and guidance also contributed to the cost and schedule overruns leading to the rebaselining.

Finding A. The project manager provided comments on the finding paragraph and the finding section, "System Effectiveness as a Key Performance Parameter."

Finding Paragraph. The project manager disagreed with the statement that the Director of Combat Developments, U.S. Army Air Defense Artillery School did not sufficiently define capability requirements for the SLAMRAAM in the draft CPD being prepared for Army staffing to support the LRIP decision program review planned for FY 2010. The project manager stated

that the July 2007 draft CPD that the audit team reviewed required additional information and was not meant to be the final product. He explained that the Army finalizes the CPD after the design readiness review, validation, and approval before the LRIP acquisition decision. He further stated that the CJCS Manual 3170.01C, "Operation of the Joint Capabilities Integration and Development System," May 1, 2007, does not require system effectiveness to be a key performance parameter. He further stated that the CJCS Manual provides that, because a CPD is finalized after the design readiness review and after the majority of capability development, it is normally not appropriate to introduce new requirements at this point.

Audit Response. We recognize that the draft CPD was not a final product and still required additional information. Therefore, we revised the report to state that the DCD had not yet (versus "did not") sufficiently defined capability requirements in the draft CPD. With regard to systems effectiveness, the report does not state that system effectiveness is required as a key performance requirement. Rather the report cites the CJCS Manual 3170.01C definition of key performance parameters as performance attributes of a system that are considered critical or essential to the development of an effective military capability and make a significant contribution to the key characteristics of the program. Also, in elevating system effectiveness to a key performance parameter, we are not introducing a new requirement. We are simply placing additional emphasis and oversight on an existing requirement.

System Effectiveness as a Key Performance Parameter. The project manager disagreed with our assertion that DCD encountered resistance from the SLAMRAAM Product Office in establishing system effectiveness as a key performance parameter. He stated that there was no resistance and that he recognizes system effectiveness as an important requirement for the warfighter. He further stated that system effectiveness is contained in the system performance specification for the SLAMRAAM and flows down to all elements of the SLAMRAAM system. The project manager's other comments on system effectiveness as a key performance parameter are discussed in the management comments section to Recommendation A.

Audit Response. During the audit, DCD staff clearly stated that they had earlier discussed establishing system effectiveness as a key performance parameter with the SLAMRAAM Product Office and that the product office staff had questioned this proposed change. For tonal purposes, we have revised the report to state that the product office staff questioned, rather than resisted, establishing system effectiveness as a key performance parameter.

Finding B. The project manager provided comments that addressed the finding sections, "Developing a Systems Engineering Plan," "Technical Reviews," "Technical Baseline Approach," and "Systems Engineering Process."

Developing a Systems Engineering Plan. The project manager disagreed with report statements concerning the requirement to have a SEP and the contractor SEMP not fully meeting the requirements of the SEP.

Requirements for Having a SEP. The project manager disagreed with stating that SLAMRAAM Product Office personnel did not have a SEP to support the systems engineering process for the SLAMRAAM in accordance with USD(AT&L) policy and guidance that was issued in 2004 concerning preparation of a SEP early in the program life cycle. The project manager stated that the SLAMRAAM program did not have a completed draft version of the SEP because the program underwent a system development and demonstration acquisition decision in September 2003, and was not required to follow the USD(AT&L) memorandum, "Policy for Systems Engineering in DoD," February 20, 2004. In addition, the project manager stated that the LRIP decision is scheduled for early FY 2010 and a completed version of the draft SEP should be ready for review by March 2008.

Audit Response. We acknowledged in the finding that a USD(AT&L) policy did not require the SLAMRAAM Program to have a completed SEP until the LRIP decision planned for early FY 2010. However, the USD(AT&L) memorandum, "Implementing Systems Engineering Plans in DoD – Interim Guidance," March 30, 2004, recommended that acquisition managers develop a SEP early in the program's life cycle. Therefore, we revised the report to state that the SLAMRAAM Program did not have a SEP to support the systems engineering process for the SLAMRAAM in accordance with USD(AT&L) guidance.

Contractor SEMP. The project manager disagreed with reporting that the SLAMRAAM Product Office staff was using the contractor-developed "Surface Launched AMRAAM (SLAMRAAM) Systems Engineering Management Plan (SEMP)," October 10, 2005, which did not fully meet the requirements of the SEP because it did not include key information that DoD systems engineering policy and guidance requires or encourages project managers to define. He stated that the contractor-developed SEMP, released in April 2004, did address the areas contained in the USD(AT&L) memorandum, "Policy for Systems Engineering in DoD," February 20, 2004, including the systems engineering processes to be applied to the program, the system's technical baseline approach, and the integration of systems engineering into the program's integrated product teams. Specifically, he stated that the SEMP contains the program description, technical baseline planning and controls, program planning and controls, the integrated product team structure, systems engineering processes, engineering specialty integration, and product transition.

Audit Response. As discussed below under "Technical Baseline Approach," we revised the report to delete statements that the SEMP did include the systems technical baseline approach. As discussed subsequently under "Systems Engineering Process," we did not revise our position on the SEMP not fully defining the systems engineering process.

Technical Reviews. The CMDS Project Manager disagreed with the statement that the SEMP did not include event-driven technical reviews. Specifically, the project manager stated that technical reviews were specified in the SEMP and in the Integrated Master Schedule. While the project manager acknowledged that the SEMP did not state entrance and success criteria for the technical reviews, he stated that the following documents, referenced in the

SEMP, did detail the event-driven technical review process from program start to closure: Raytheon's Integrated Defense System "Systems Engineering Practices and Procedures," and Raytheon's "Integrated Product Development System." The project manager further stated that the technical review process contains a series of 10 "gates" containing entry and exit criteria for conducting technical reviews, with gates 1 through 4 for reviews internal to Raytheon and gates 5 through 10 for Government reviews. In addition, the project manager stated that the SLAMRAAM Product Manager issued the Design Review Campaign Plan for Raytheon to use to address the design review process, including design review entry and exit criteria. The project manager stated that the SLAMRAAM Product Office followed Program Executive Office Policy 04-36, "Program Executive Office Management Control Checklist" for conducting event-driven reviews and ensuring that the contractor met review entry and exit criteria. Lastly, the product manager stated that our report implied that the SLAMRAAM Product Manager did not tie technical reviews to event-driven criteria. As proof to the contrary, the project manager cited a March 9, 2005, letter in the contract that stated that Raytheon had not met entrance criteria for a preliminary design review, and therefore could not proceed with development effort until it met these prerequisites.

Audit Response. We revised the report to clarify that, while the SEMP does specify the following technical reviews: system requirements review, system design review, critical design review, and test readiness review, it did not provide entrance and exit criteria for these reviews. We also revised the report to emphasize the importance of including entrance and exit criteria for the technical reviews specified in the SEMP, rather than imply that the product manager never tied technical reviews to event-driven criteria. We did not revise the report to state that the project manager had established entry and exit criteria for SLAMRAAM technical reviews through the documents and policies he referenced in his comments. While these documents and policies did describe the event-driven technical review process, they did not provide specific entry and exit criteria for the technical reviews included in the SEMP. The "SLAMRAAM Program Manager's Guidelines for Conducting Design Reviews," August 2005, which documents the Design Review Campaign Plan, provides an example of the process description. This document states that the program manager requires integrated product teams to develop comprehensive entry and exit criteria for his approval before each review, but does not include any specific entry and exit criteria. We also reviewed the following five additional documents the project manager provided in response to the draft report:

- "Part, Material and Process (PMP) Plan," June 1, 2005;
- "Draft Fire Unit CDR Readiness Review," August 19, 2005;
- "CDR Program Risk Assessment Checklist," August 1, 2004;
- "Integrated Product Development System - IPDS Brochure," (no date); and
- "Independent Review 8 (IR8) Checklist - Detailed Design (Build Readiness)," October 31, 2003.

With the exception of the "Draft Fire Unit CDR Readiness Review," August 19, 2005, which contained entry and exit criteria for conducting the critical design review on the fire unit, none of the above documents included specific entrance or exit criteria for planned program technical reviews.

Technical Baseline Approach. The CMDS Project Manager stated that the SEMP outlines the technical baseline approach in summary form, while the technical performance baseline is contained in Government-controlled system performance specifications and various contractor specifications. He stated that this documentation was available in the SLAMRAAM Integrated Data Environment through the requirements database tools.

Audit Response. We revised the report by deleting the discussion of the technical baseline approach. While the SEMP did not specifically mention technical baseline approach, the section "Technical Planning and Control" did describe procedures for establishing a baseline, controlling baseline changes, tracing system requirements, and using technical performance measures to monitor and control the program's performance. Therefore, the SEMP did meet the intent of guidance in the USD(AT&L) memorandum, "Implementing Systems Engineering Plans in DoD – Interim Guidance," March 30, 2004, for defining the technical baseline approach.

Systems Engineering Process. The CMDS Project Manager disagreed with our assertion that the contractor-developed SEMP did not fully define all systems engineering processes applied to the SLAMRAAM. He stated that the SEMP, together with Raytheon's "Systems Engineering Practices and Procedures" and "Integrated Product Development System," the joint Raytheon/Government "gate" review process and Design Review Campaign Plan, Program Executive Officer policies, the independent assessment team, and the Government-controlled technical baseline, met the intent of the SEP guidance and provided him with a well-defined systems engineering process and technical baseline approach for the SLAMRAAM. The CMDS Project Manager further stated that the systems engineering processes allowed SLAMRAAM to recover from a major contractor performance shortfall to a highly successful critical design review some 15 months later.

Audit Response. We did not revise the report to state that documents and policies the project manager discusses together met the intent of the SEP guidance for defining the systems engineering process. The USD(AT&L) memorandum, "Implementing Systems Engineering Plans in DoD – Interim Guidance," March 30, 2004, states that the SEP should be a living document that includes updates of program progress, such as the results of completed technical reviews. The SEMP had not been updated to reflect the systems engineering progress since October 2005.

Finding C. The project manager provided comments that addressed the finding paragraph and the finding sections "Establishing Letters of Delegation," and "Conclusion."

Finding Paragraph. The project manager disagreed with our assertion that the Commander, Defense Contracting Management Agency did not fully

describe DCMA activities to support the SLAMRAAM Program in a surveillance plan and establish letters of delegation with other DCMA contract management offices for surveillance at three of four SLAMRAAM subcontractors. The project manager stated that DCMA provided excellent support and kept the SLAMRAAM Product Manager informed on progress regardless of the content or structure of the MOA or the existence of LODs.

Audit Response. We did not revise the report based on the project manager's comments. The report correctly states that the commander did not fully describe DCMA activities to support the SLAMRAAM Program in a surveillance plan and establish letters of delegation with other DCMA contract management offices for surveillance at three of four SLAMRAAM subcontractors. While the project manager may claim satisfaction with DCMA support, establishing a surveillance plan and LODs, as discussed in the finding, would have helped DCMA contract management offices to better plan and track surveillance support activities. Additionally, the DCMA Instruction requires an outcome-oriented LOD when the prime contractor contracts to a subcontractor to work on specified tasks.

Establishing Letters of Delegation. The project manager disagreed that an LOD with the DCMA Support Program Integrator at Boeing Huntsville, which required formal reports and earned value management, would have provided the project manager with more meaningful information towards satisfying SLAMRAAM cost, schedule, and performance requirements. He stated that the SLAMRAAM Program received cost, schedule, and performance information from a DCMA Support Program Integrator at the Boeing Huntsville, Alabama, plant and that this program integrator was listed in Annex D of the MOA. He additionally stated that the support program integrator and SLAMRAAM Product Office personnel interfaced on a nearly daily basis. In summary, the project manager stated that, even without an LOD in place, the SLAMRAAM Product Manager received the required level of support from DCMA on the Boeing subcontract and that there was no evidence to suggest that the lack of an LOD affected the quality or quantity of information concerning subcontractor progress or status.

Audit Response. We did not revise the report based on the project manager's comments. The lack of an LOD with DCMA Boeing did have an impact on reporting to the SLAMRAAM Program. Specifically, we spoke to the DCMA Boeing Program Integrator listed in Appendix D of the MOA concerning the impact of not having an LOD with DCMA Boeing. He stated that the SLAMRAAM Program Integrator did request him to provide earned value management support on Boeing's cost and schedule progress, but, without an approved LOD, he was not able to assign personnel resources to support earned value reporting to the SLAMRAAM Program.

Conclusion. The project manager disagreed with our assertion that, without a focused and comprehensive MOA supported by a surveillance plan and LODs, DCMA staff was not in a position to provide the Project Manager, CMDS with timely and meaningful insights and recommendations regarding the contractor progress toward attaining cost, schedule, and performance contract requirements for SLAMRAAM. The project manager stated that there was no

quantifiable evidence to show that any issues with the MOA affected the support provided by DCMA or the quality or quantity of information provided concerning contractor progress and status. He further stated that the quality of an MOA did not necessarily equate to quality support, nor can one conclude that problems with an MOA automatically equate to problems with the support.

Audit Response. We recognize that it is difficult to quantify exactly how much better DCMA support would have been, had there been a focused and comprehensive MOA, supported by a surveillance plan and LODs. Therefore, we revised the report to state that DCMA staff were not in a position to provide the Project Manager, CMDS with the most timely and meaningful insights and recommendations on contractor progress toward attaining cost, schedule, and performance contract requirements for SLAMRAAM. The statements of the Boeing program integrator under "Establishing Letters of Delegation" above did provide one example of a specific negative impact on program reporting with regard to earned value. While we recognize that a quality MOA does not necessarily equate to quality support, DCMA officials stated that establishing performance metrics and standards in the MOA to focus and measure DCMA's efforts in meeting customer-desired outcomes enables DCMA to more efficiently use limited resources to support program managers.

Acting Director, Defense Contract Management Agency Comments and Audit Response

Management Comments. The acting director provided comments on the "Background" section of the report and on Finding C.

Report Background. The acting director stated that it was probably an overstatement to state that the DCMA Commander's lack of adherence to policy was one of the primary causes of the program rebaselining.

Audit Response. As stated earlier, we revised the Report Background to state that engineering and funding problems, along with the Marine Corps withdrawing from the program, were the primary causes for the program rebaseline.

Finding C. The acting director provided comments that addressed the finding section, "Actions to Improve the Quality of Surveillance Plans." Specifically, the acting director suggested that we delete the statement that DCMA did not establish a mandatory requirement for contract management offices to use surveillance plans or activity annexes in the interim until full implementation of the Electronic Data Management System.

Audit Response. We did not make the suggested change as DCMA did not establish a mandatory requirement for contract management offices to use surveillance plans or activity annexes in the interim until full implementation of the Electronic Data Management System.

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
    Director, Acquisition Resources and Analysis
    Director, Defense Procurement and Acquisition Policy
Under Secretary of Defense (Comptroller)/Chief Financial Officer
    Deputy Chief Financial Officer
    Deputy Comptroller (Program/Budget)
Director, Program Analysis and Evaluation

Joint Staff

Director, Joint Staff

Department of the Army

Assistant Secretary of the Army (Financial Management and Comptroller)
Auditor General, Department of the Army
Director of Combat Developments, Army Air Defense Artillery School
Project Manager, Cruise Missile Defense System
    Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile

Department of the Navy

Naval Inspector General
Auditor General, Department of the Navy

Department of the Air Force

Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Management Agency

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Senate Committee on Appropriations
Senate Subcommittee on Defense, Committee on Appropriations
Senate Committee on Armed Services
Senate Committee on Homeland Security and Governmental Affairs
House Committee on Appropriations
House Subcommittee on Defense, Committee on Appropriations
House Committee on Armed Services
House Committee on Oversight and Government Reform
House Subcommittee on Government Management, Organization, and Procurement, Committee on Oversight and Government Reform
House Subcommittee on National Security and Foreign Affairs, Committee on Oversight and Government Reform

Defense Contract Management Agency Comments

DEFENSE CONTRACT MANAGEMENT AGENCY
6350 WALKER LANE, SUITE 300
ALEXANDRIA, VA 22310-3241

IN REPLY REFER TO DCMA-DMI

OCT 15 2007

MEMORANDUM FOR PROGRAM DIRECTOR, ACQUISITION AND CONTRACT MANAGEMENT, DEPARTMENT OF DEFENSE INSPECTOR GENERAL, OFFICE OF THE DEPUTY INSPECTOR GENERAL

SUBJECT: Department of Defense – Inspector General Draft Report, Project Number D2007-D000AE-0060, Report on the Acquisition of Surface-Launched Advanced Medium-Range Air-to-Air Missile

Reference: DoDIG draft audit report, Project Number D2007-D000AE-0060, subject as above.

We have attached the Headquarters Defense Contract Management Agency response and technical comments to the findings and recommendations cited in the subject report.

Point of contact is [redacted] at (703) 530-[redacted] or [redacted]@dcma.mil.

KEITH D. ERNST
Acting Director

ATTACHMENT
As

b(6)

SUBJECT: Acquisition of the Surface-Launched Advanced Medium-Range Air-to-Air Missile (Project Number D2007-D000AE-0060)

FINDING C: Establishing Defense Contract Management Agency Support Responsibilities

The Commander, Defense Contract Management Agency (DCMA) Space Sensors and Communications Operations, Raytheon Integrated Defense Systems and the Project Manager, Cruise Missile Defense System (CMDS) did not adequately establish and document needed DCMA support in the memorandum of agreement (MOA) for the SLAMRAAM program. Specifically, the MOA did not reference current DCMA policy and fully establish links between the MOA performance metrics and the project manager's desired outcomes for the SLAMRAAM program. Additionally, the commander did not fully describe DCMA activities to support the SLAMRAAM program in a surveillance plan and establish letters of delegation (LOD) with other DCMA contract management offices for surveillance at three of four SLAMRAAM subcontractors. These conditions occurred because the commander did not completely adhere to provisions in the Federal Acquisition Regulation, the DCMA Instruction, and the DCMA Guidebook for preparing an MOA, formulating a surveillance plan, and establishing LODs. As a result, DCMA did not have information needed to provide the project manager with informed recommendations regarding contractor progress toward attaining contract cost, schedule, and performance requirements.

RECOMMENDATION C1a & b

We recommend that the Commander, Defense Contract Management Agency Space Sensors and Communications Operations, Raytheon Integrated Defense Systems and the Project Manager, Cruise Missile Defense Systems revise the memorandum of agreement for the Surface-Launched Advanced Medium-Range Air-to-Air Missile to:

a. Reference the current Defense Contract Management Agency Instruction and Defense Contract Management Agency Guidebook.
b. Include an annex that documents a cause-and-effect analysis linking Defense Contract Management Agency performance metrics and standards to the customer-desired outcome, in accordance with the Defense Contract Management Agency Instruction.

DCMA COMMENTS: **Concur.** Concur with the recommendations as stated. DCMA IDS is in process of updating the MOA in accordance with the current agency guidelines and instructions. Target date for completion of this task (MOA update) is First Quarter FY08.

RECOMMENDATION C2

We recommend that the Acting Director, Defense Contract Management Agency update the DCMA Instruction to require that memorandums of agreement with acquisition program managers include surveillance plans or activity annexes that prioritize Defense Contract Management Agency support that will be provided to an acquisition program,

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performance metrics and standards, and identify what, when, where, and how the Defense Contract Management Agency staff will perform activities to support surveillance until the electronic Data Management System is completed.

DCMA COMMENTS: Nonconcur. DCMA does not concur with the recommendation. We have a method of implementation already in place that we believe is more effective than requiring that the noted information be a mandatory part of the MOA.

DCMA policy does not require the inclusion of the performance commitment strategy (surveillance plan) in the MOAs we execute with our customers. Inclusion of the strategy (Annex E of the MOA) is discretionary unless requested by the customer. The reason that we do not make the inclusion of Annex E mandatory is that our commitment is not to the activities that are the strategy, but to the results (performance commitments) noted in the body of the MOA. This distinction is the very heart of DCMA performance-based management. If we made the inclusion of Annex E mandatory, then we would be committing not only to the results desired, but to a strategy (set of activities) that may need to change if the analysis shows that progress toward the results was not satisfactory. The preference for results is both logical and consistent with the intent of the Budget and Performance Integration direction in the President's Management Agenda, the Lean/Six Sigma initiative of the USD (AT&L) and other DoD initiatives to reorient the management of the Department toward performance results. While the inclusion of Annex E is not mandatory in the MOA, DCMA does require that contract management offices execute the strategies (aka surveillance plans) to achieve their performance commitments. We chose another way of ensuring that the activities that make up the strategies are executed. The activities that comprise the strategies are contained in the Individual Performance Plans (IPP) of the functional specialists. By documenting the strategies in this fashion, we make execution a direct linkage between the organizational performance commitments and the factors that determine performance of the DCMA workforce. To ensure that the strategies are always maximally effective we have made the organizational performance commitments critical job elements of the IPP of the individuals who supervise those executing the activities of the strategies. This linkage of organizational and individual performance makes our PBM approach one that is focused on appropriate priorities and "self-governing." What needs to be achieved (the results) and what needs to be done to achieve those results is ingrained in our normal course of doing business and in the rating scheme for both our organizational and individual performance assessments.

RECOMMENDATION C3

We recommend that the Commander, Defense Contract Management Agency Space Sensors and Communications Operations, Raytheon Integrated Defense Systems establish letters of delegation with supporting Defense Contract Management Agency contract management offices for subcontractor surveillance at Raytheon Network Centric Systems and Thales Raytheon Systems subcontractors, in accordance with the Defense Contract Management Agency Instruction.

SUBJECT: Acquisition of the Surface-Launched Advanced Medium-Range Air-to-Air Missile (Project Number D2007-D000AE-0060)

DCMA COMMENTS: Partially Concur. DCMA IDS will establish a letter of delegation at Thales Raytheon Systems (TRS) to support the upcoming Software Qualification Testing (SQT). This testing is currently delayed based on the late delivery of Government Furnished Equipment (GFE) but will be completed prior to the end of 2nd quarter FY 08.

At this time the work at Raytheon Network Centric Systems (NCS) is completed and any future delegations would be limited to rework or repair of the items delivered to Raytheon IDS. Therefore, given the completion of the work at Raytheon NCS, we consider a formal delegation to not be necessary or cost effective.

Final Report Reference

SUBJECT: Acquisition of the Surface-Launched Advanced Medium-Range Air-to-Air Missile (Project Number D2007-D000AE-0060)

Technical Comments:

RECOMMENDED CHANGES TO THE REPORT

STATEMENT:
Factors causing the rebaselining and associated cost increase included the Army not sufficiently defining capability requirements in the operational requirements document used to develop the draft capability production document (CPD), contractor difficulties in understanding and allocating system requirements to subcontractors, and the DCMA commander not completely adhering to policy and guidance.
Section: Background (Page 2)
Paragraph: Program Rebaseline

Page 2

SUGGESTED CHANGE:
Factors causing the rebaselining and associated cost increase included the Army not sufficiently defining capability requirements in the operational requirements document used to develop the draft capability production document (CPD) and contractor difficulties in understanding and allocating system requirements to subcontractors. A factor that may have contributed to the rebaselining and associated cost increase was the DCMA commander not completely adhering to policy and guidance.

Revised

DCMA COMMENTS:
While the lack of adherence to policy may have limited the visibility of the SLAMRAAM Project Manager into selected cost and schedule issues, it being characterized as one of the primary causes of the rebaselining is probably an overstatement. Recommend the change noted above.

STATEMENT:
The DCMA officials stated that performance-based management enables DCMA to more efficiently use limited resources to support program managers by establishing performance metrics and standards in the MOA to focus and measure DCMA's efforts in meeting customer-desired outcomes.
Section: Defense Contract Management Agency Support to SLAMRAAM (Page 12)
Paragraph: Applicable Policy and Guidance

Page 14

SUGGESTED CHANGE:
Change the clause "... DCMA's efforts in meeting customer-desired outcomes." in the 3rd sentence (shown above) to "... DCMA's efforts in helping customers meet their desired outcomes."

Revised

STATEMENT:
As a result, DCMA could better support the program manager by focusing its limited resources through performance metrics and standards to achieve customer-desired outcomes and enable him to provide informed recommendations on contractor performance.

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Final Report Reference

SUBJECT: Acquisition of the Surface-Launched Advanced Medium-Range Air-to-Air Missile (Project Number D2007-D000AE-0060)

Page 15

Section: Defense Contract Management Agency Support to SLAMRAAM (Page 12)
Paragraph: Cause-and-Effect Analysis Annex

Revised

SUGGESTED CHANGE:
In the 3rd sentence (shown above), change the clause "... to achieve customer-desired outcomes and enable him to provide informed recommendations on contractor performance " to " ... to help the customer achieve its desired outcomes and enable the program manager to provide informed recommendations on contractor performance."

Page 15

STATEMENT:
Section: Defense Contract Management Agency Support to SLAMRAAM (Page 13)
Paragraph: Actions to Improve the Quality of Surveillance Plans

Revised

SUGGESTED CHANGE:
- Capitalize the word "electronic" in the 1st sentence.
- Change the word "provide" in the 1st sentence to "link."

DCMA COMMENTS:
- The application is the Electronic Data Management System (EDMS).
- The EDMS will not "provide" or house all of the information noted but will be the link that connects that information and enables effective configuration control of the same.

Page 15

STATEMENT:
(3rd paragraph; 2nd sentence) ..., DCMA did not establish a mandatory requirement for contract management offices to use surveillance plans or activity annexes in the interim.
Section: Defense Contract Management Agency Support to SLAMRAAM (Page 13)
Paragraph: Actions to Improve the Quality of Surveillance Plans

Not deleted, see Audit Response to Management Comments to Recommendation C.2 on page 18

SUGGESTED CHANGE:
Delete paragraph 3.

DCMA COMMENTS:
See DCMA response to finding C.2 wherein we non concur with the recommendation of adding a surveillance plan to Annex E of the MOA.

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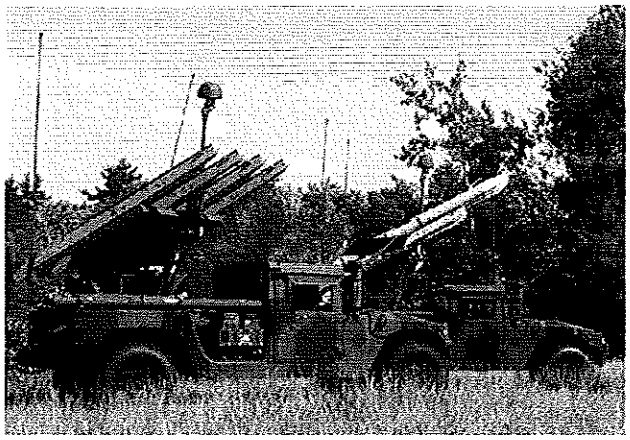
Department of the Army, Project Manager, Cruise Missile Defense System Comments

UNCLASSIFIED

Surface Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM) System



Comments to the proposed DoD Inspector General Report "Acquisition of the Surface-Launched Advanced Medium Range Air-to-Air Missile"

Project No. D2007-D000AE-0060.000, dated August 17, 2007

10 September 2007

Final Report Reference

EXECUTIVE SUMMARY

Comments to the proposed DoD Inspector General Report "Acquisition of the Surface-Launched Advanced Medium Range Air-to-Air Missile"

Project No. D2007-D000AE-0060.000, dated August 17, 2007

10 September 2007

1. Overview

The Cruise Missile Defense System (CMDS) Project Office, Product Manager (PM) for the Surface Launched Advanced Medium Range Air-to-Air Missile (SLAMRAAM) System has reviewed the subject document and offers the following comments to the findings stated in the report.

The following comments address statements made in the IG Report (in italics) followed by the PM-SLAMRAAM rational for non-concurrence. Specific comments to the executive summary were not made since it is a summary of the findings.

2. IG Report – Background Section

Page 2

"Factors causing the rebaselining and associated cost increase included the Army not sufficiently defining capability requirements in the operational requirements document used to develop the draft capability production document (CPD), contractor difficulties in understanding and allocating system requirements to subcontractors, and the DCMA commander not completely adhering to policy and guidance." (IG Report page 2)

The CMDS Project Office non-concurs with this conclusion.

There is no evidence to support that there is any correlation between the need to re-baseline the SLAMRAAM program and the capability requirements, systems engineering planning, or the use of DCMA. The reasons for the re-baseline are twofold: 1) the contractor failed to follow established engineering processes which required the Government to direct that the contractor (Raytheon Integrated Defense Systems) stop development and address the associated problems, and 2) Congressional action in 2006 that denied requests for additional money to cover the contractor overrun and the Marine Corps withdrawal from the program in 2006.

The contractor performance shortfall was documented in a contracts letter to the contractor dated March 9, 2005 (US Army Aviation and Missile Command AMSAM-AC-SM-T (SL-007-05)). The letter documented the contractor's "failure to execute a rigorous system engineering process, delinquent or incomplete data deliveries, incomplete traceability of requirements through the hardware and software, and what

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appears to be a fundamental misinterpretation of some contract requirements resulting in unresolved issues with respect to the design approaches."

The letter informed Raytheon that the Government was dissatisfied with its manner of performance with respect to delivery of system engineering products, that it did not fulfill the entrance criteria for a SLAMRAAM System Preliminary Design Review, that it would not proceed with software development until authorized by the Government, and that hardware manufacturing would not begin until the requisite design reviews are successfully completed. The Government requested a recovery plan which included a series of incremental reviews leading to a System Critical Design Review; this recovery plan was delivered by Raytheon in April 2005.

The Government letter documented evidence of these facts: "the Government and Raytheon have jointly developed and agreed to SPDR (System Preliminary Design Review) entry criteria that further specify products needed to hold a successful review. In the Government's opinion the data and products delivered to date fail to meet the requirements … Important products required by the contract or entry criteria are unavailable for review or were delivered incomplete. The technical adequacy of the derived requirements and allocated baseline flow down is deficient. Software requirements are not complete or stable. The interfaces among the Configuration Items are incomplete and deficient. The full bi-directional traceability for each individual software requirement as required by the contract and the contractual Software Development Plan is absent, negating the ability to determine the maturity of the software and safety requirements".

On Finding B, the IG reported the following:

"Without tying technical reviews to event-driven criteria through established entrance and success criteria for these reviews, the product manager cannot ensure that technical reviews are held only when program accomplishments make them warranted and meaningful in measuring program results (IG Report page 8)."

Pages 10-11

This statement implies that the PM did not tie technical reviews to event-driven criteria. As can be seen from the contract letter just quoted, that was not the case. The CMDS Project Office non-concurs with this implication.

A strong system engineering process was in place; the contractor failed to follow it and the SLAMRAAM Government PM used effective management controls to correct the situation.

The need to re-baseline the SLAMRAAM program was not due to the capability requirements, systems engineering planning, or the use of DCMA. These areas are discussed in the Findings below.

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Final Report Reference

Page 4

Page 4

Page 5

3. Finding A: Defining Capability Requirements

The CMDS Project Office non-concurs with this finding.

"The Director of Combat Developments (DCD), U.S. Army Air Defense Artillery School, did not sufficiently define capability requirements for the SLAMRAAM in the draft CPD being prepared for Army staffing to support the LRIP decision program review planned for FY 2010." (IG Report page 4)

The CMDS Project Office non-concurs with this statement.

"A CPD is finalized after design readiness review and is validated and approved before the Milestone C acquisition decision (CJCSM 3170.01C)". The SLAMRAAM CPD is currently in draft form and requires additional information to support the Milestone C decision to proceed with LRIP. SLAMRAAM has not yet fully transitioned from Systems Integration to System Demonstration (as defined in DODI 5000.2) as the system has yet to perform "adequate development testing" as required by DODI 5000.2. This testing will mature in FY08. During FY08, the CPD will continue to mature to capture not only design review data but also test data as required. The current draft CPD (July 2007) reviewed by the IG team was not meant to be the final product.

"Specifically, the draft CPD did not identify system effectiveness as a key performance parameter (IG Report page 4)"

The CMDS Project Office non-concurs that system effectiveness is required to be a KPP.

"The CPD refines the threshold and objective values for performance attributes and KPPs that were validated in the CDD for the production increment (CJCSM 3170.01C)". The SLAMRAAM Milestone B was supported by a validated Operational Requirements Document (ORD); a CDD was not developed. The ORD did not contain system effectiveness as a KPP. The current CJCSM 3170.01C (1 May 2007) does not require that system effectiveness be a KPP. The CJCSM guidance states that "Because a CPD is finalized after design readiness review and after the majority of capability development, it is normally not appropriate to introduce new requirements at this point."

"During the audit, DCD staff stated that they intended for system effectiveness to be a key performance parameter but encountered resistance from the SLAMRAAM Product Office. DCD staff stated that the SLAMRAAM Product Office resisted because SLAMRAAM system effectiveness was directly related to proven capabilities of the Government-furnished AMRAAM, which the product office had no influence over (IG Report page 5)."

The CMDS Project Office non-concurs with this statement.

There is no "resistance". The system effectiveness is an important requirement for the war-fighter and an important performance requirement, just not a KPP. The system

effectiveness is contained in the SLAMRAAM System Performance Specification and has been flowed down to all elements in the SLAMRAAM System.

System effectiveness was not a KPP at the Milestone B decision because SLAMRAAM relied on an existing missile and existing sensors. These elements contribute heavily to the system effectiveness equation but the performance of these elements is beyond the control of the SLAMRAAM Materiel Developer. This was correctly noted in the IG Report.

The parameters that are under the control of the SLAMRAAM Materiel Developer, [redacted] do contribute to the system effectiveness. But making them KPPs would be of marginal value since these parameters each may be met, and yet the overall system may still fall short of a desired capability since the performance of the missile and the sensor within a SLAMRAAM System has not been demonstrated. Likewise, shortfalls may be identified in [redacted] but the overall system could still deliver a desired capability. Predictions indicate a viable military capability but the system effectiveness value can only be determined at the end of the SDD phase, where the true performance of the missile and the sensor in the SLAMRAAM System context can be determined.

Thus, the system effectiveness remains a performance attribute that will be quantified at Milestone C as end-to-end performance, including the sensor and missile performance. A decision can be made at that time to assess the combat utility of the system.

"Recommendation A: We recommend that the Directorate of Combat Development, U.S. Army Air Defense Artillery School revise the draft capability production document for the Surface-Launched Advanced Medium-Range Air-to-Air Missile in accordance with policy in Chairman Joint Chiefs of Staff Instruction 3170.01F, "Joint Capabilities Integration and Development System," May 1, 2007, to define the probability of [redacted] as a key performance parameter; and measurable and testable capability requirements for [redacted]

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As discussed above, the CMDS Project Office non-concurs that [redacted] need to be KPPs. The CMDS Project Office concurs that all CPD capabilities should be "measurable and testable". The current draft CPD (July 2007) reviewed by the IG team was not meant to be the final product. The SLAMRAAM Product Office is working with DCD to ensure that the CPD meets established CJCS policy for defining system capability. The final CPD will ensure that the SLAMRAAM satisfies essential war-fighter needs.

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4. Finding B – Planning for Systems Engineering

The CMDS Project Office non-concurs with this finding.

"SLAMRAAM Product Office personnel stated they did not have a SEP to support the systems engineering process for the SLAMRAAM in accordance with USD (AT&L) policy and guidance that was issued in 2004 concerning preparation of a SEP early in the program life cycle. The SLAMRAAM Product Office staff stated that while they had started working towards a SEP, they did not have a draft version of the SEP for us to review (IG Report page 8)."

The CMDS Project Office non-concurs with this statement.

The USD (AT&L) policy states that "Programs shall develop a Systems Engineering Plan (SEP) for Milestone Decision Authority (MDA) approval in conjunction with each Milestone review…" (USD (AT&L) Memorandum, "Policy for Systems Engineering in DoD," February 20, 2004). The SLAMRAAM Program underwent a Milestone B review in September 2003; this policy was not published until February 2004. The System Engineering Plan will be developed to support the Milestone C decision in early FY10. That decision is two years off thus a complete draft was not available for review. The SEP is currently being drafted and an initial draft for review should be available by March 2008.

In the meantime, the SLAMRAAM Product Office staff was using the contractor-developed "Surfaced Launched AMRAAM (SLAMRAAM) Systems Engineering Management Plan (SEMP)," October 10, 2005, to support the systems engineering process for the program. This SEMP did not fully meet the requirements of the SEP because it did not include key information that DoD systems engineering policy and guidance requires or encourages project managers to define (IG Report page 8)."

The CMDS Project Office non-concurs with this statement.

The contract specified that the contractor prepare a SEMP as a data item deliverable to the Government. The initial version was released in April 2004, two months after contract award and was refined over the following year. The SEMP addressed the areas contained in the USD (AT&L) Memorandum, "Policy for Systems Engineering in DoD," February 20, 2004: the systems engineering processes to be applied to the program, the system's technical baseline approach, and the integration of systems engineering into the program's integrated product teams (IPTs). Specifically, the SEMP contains the program description, technical baseline planning and controls, program planning and controls, the IPT structure, the systems engineering processes to be used, engineering specialty integration, and product transition.

"The SEMP did not include event-driven technical reviews, with entrance and success criteria (IG Report page 8)".

The CMDS Project Office non-concurs with this statement.

Technical reviews are specified in the SEMP and are also specified in the Integrated Master Schedule. While the entrance and success criteria are not contained in the SEMP itself, there are two important documents incorporated into the SEMP by reference: the Raytheon Integrated Defense Systems (IDS) "Systems Engineering Practices and Procedures" and Raytheon's "Integrated Product Development System (IPDS)". These outline the detailed event-driven technical review process that was used on SLAMRAAM. The technical review process contains a series of ten "gates" that a program goes through, spanning program startup through program closure. Gates one through four are internal to Raytheon and outline their proposal generation and review process. Gates five and beyond are customer reviews.

Gate 5: Program Startup Readiness Review

Gate 6: System Requirements and Concept Design Review

Gate 7: Preliminary Design Review (PDR)

Gate 8: Critical Design Review (CDR)

Gate 9: Test/Ship Readiness Review

Gate 10: Production Readiness Review (functional audits)

Each of these gates contains detailed criteria for conducting the review. These criteria include areas to be assessed, entry and exit criteria, and review products required. The criteria are crossed referenced to the Raytheon IPDS and their Capability Maturity Model Integration (CMMI) programs. For example, a typical design review contains over 50 scored criteria.

In addition, the SLAMRAAM Program Manager issued a Design Review Campaign plan in August 2005 to further address the design review process to be used by Raytheon following completing its Recovery effort to correct the initial contract overrun. The plan included design review guidelines, agenda topics, entry and exit criteria, and a detailed assessment checklist (in addition to the Raytheon Gate checklists). This plan was made available to the IG team.

The SLAMRAAM Product Office also followed the Program Executive Office (PEO) Management Control Checklist for conducting reviews, PEO Policy 04-36. This policy contained important requirements for conducting event-driven reviews. The PEO chartered an Independent Assessment Team (IAT) to oversee the SLAMRAAM review process. The IAT was chaired by the PEO Director of Independent Assessments and contained subject matter experts from outside the SLAMRAAM program. This team ensured that entry and exit criteria were met and scored. The team briefed the PEO on the review results.

All reviews were supported by the required documentation, action items, and after action reports. The IAT reports were provided to the PEO and the SLAMRAAM Product Manager received out-briefs.

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"Technical reviews measure contractor progress toward attaining well-defined technical, cost, and schedule goals; assess system technical maturity and risk; and provide information to support program decisions. Without tying technical reviews to event-driven criteria through established entrance and success criteria for these reviews, the product manager cannot ensure that technical reviews are held only when program accomplishments make them warranted and meaningful in measuring program results. (IG Report page 9)."

The CMDS Project Office concurs with this statement. That is why SLAMRAAM employed a detailed, in-depth event driven review process based on industry best practice, with senior leadership independent oversight. This process was fully documented, although not in the SEMP.

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"The SEMP did not include the system's technical baseline approach. The technical baseline approach describes how the project manager will develop, manage, and use the technical baseline to control system requirements, design, integration, verification, and validation. Without identifying the planned technical baseline approach, the product manager cannot effectively control system requirements, design, and integration from an engineering perspective (IG Report page 9)."

The CMDS Project Office non-concurs with this statement.

The SEMP outlines the technical baseline approach in a summary fashion. In addition to the information contained in the SEMP, the technical performance baseline is contained in the Government controlled System Performance Specification and various contractor specifications. A detailed specification tree is maintained. All documentation is available on the SLAMRAAM Integrated Data Environment and requirements are accessed through requirements database tools. The development effort is further controlled by a detailed Integrated Master Schedule.

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"The contractor-developed SEMP did not fully define all systems engineering processes applied to the SLAMRAAM. Specifically, the SEMP only identified the processes that the contractor initially planned to complete during the system development and demonstration phase of the acquisition process and the contractor had not updated it to implement the results of the completed engineering processes, such as the system requirements review. Prepared and validated as required, the product office SEP would have identified key systems engineering processes during the system development and demonstration phase, included updates based on completed technical reviews, and described how the systems engineering process would support the technical products of each acquisition phase (IG Report page 9)."

The CMDS Project Office non-concurs with this statement.

As discussed above, the program initially had no requirement nor was resourced to produce or update a SEP until the next program milestone. The contractor developed SEMP, the Raytheon Integrated Defense Systems (IDS) "Systems Engineering Practices and Procedures", Raytheon's "Integrated Product Development System (IPDS), the joint

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Raytheon – Government Gate review process and Design Review Campaign plan, PEO policies, the Independent Assessment Team, and the Government controlled technical baseline taken together met the intent of the SEP guidance. These processes, when looked at as a whole, provided the product manager with well-defined systems engineering process and technical baseline approach for the SLAMRAAM. In addition, there were event-driven technical reviews with well defined entrance and success criteria, thus helping the product manager to effectively manage the systems engineering process.

These systems engineering processes permitted the program to recover from a major contractor performance shortfall one year into the program to a highly successful Critical Design Review 15 months later. The program currently has a firm technical baseline and is executing to cost and schedule. If funding were made available in 2006, the current re-baseline effort would have been unnecessary.

"Recommendation B: We recommend that the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile revise the draft systems engineering plan to establish a comprehensive systems engineering plan (in accordance with Under Secretary of Defense for Acquisition, Technology, and Logistics memorandums "Policy for Systems Engineering in DoD," February 20, 2004; "Policy Addendum for Systems Engineering," October 22, 2004; and "Implementing Systems Engineering Plans in DoD – Interim Guidance," March 30, 2004) that includes planning for: technical reviews that are event-driven, with entrance and success criteria; technical baseline approach for developing the system; and systems engineering processes applied to the Surface-Launched Advanced Medium-Range Air-to-Air Missile. (IG Report page 10)."

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The CMDS Project Office concurs: The SEP has been and will continue to be prepared for the Milestone C decision in accordance with Under Secretary of Defense for Acquisition, Technology, and Logistics memorandums "Policy for Systems Engineering in DoD," February 20, 2004; "Policy Addendum for Systems Engineering," October 22, 2004; and "Implementing Systems Engineering Plans in DoD – Interim Guidance," March 30, 2004.

5. Finding C – Establishing Defense Contract Management Agency Support Responsibilities

The CMDS Project Office non-concurs with this finding.

"the commander did not fully describe DCMA activities to support the SLAMRAAM program in a surveillance plan and establish letters of delegation (LOD) with other DCMA contract management offices for surveillance at three of four SLAMRAAM subcontractors (IG Report page 11)."

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The CMDS Project Office non-concurs with this statement.

Regardless of the content or structure of the MOA or existence of LOD's to subcontractors, the SLAMRAAM Product Manager received and is receiving excellent

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support from DCMA. Representatives from various functional areas within DCMA participate in all IPT's and DCMA support was and continues to be focused based on current program need and phase.

The program was able to access DCMA at Raytheon TRS via the Sentinel program, part of the CMDS Project Office, as needed. An LOD was established with DCMA in Norway and was used frequently to keep the SLAMRAAM Product Manager informed.

"Specifically, while a DCMA support program integrator at Boeing Huntsville stated that he provided the project manager with regular reports and analysis of Boeing's progress on the IFCS, he stated that, without an approved LOD, his reporting was informal and did not include earned value management cost and schedule analysis. ... Therefore, we believe that the formalized reporting, to include earned value management, that the DCMA support program integrator at Boeing Huntsville could have provided under an LOD would have given the project manager more meaningful information on the subcontractors' progress towards satisfying SLAMRAAM cost, schedule, and performance requirements (IG Report page 14)."

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The CMDS Project Office non-concurs with this statement.

DCMA located at Boeing supported the IPT even though the LOD was not established. A DCMA Support Program Integrator (SPI) was at the Boeing Huntsville, AL plant. This position is listed in Annex D of the MOA. The monthly reports provided to the Project Office reflected status received from the DCMA Boeing SPI. The SPI and SLAMRAAM Product Office personnel interfaced on a near daily basis since both were located in Huntsville. This daily interface enhanced overall involvement of DCMA Boeing's support to the program. The Program Integrator provided the Project Manager with meaningful information on the subcontractor's progress towards satisfying SLAMRAAM cost, schedule, and performance requirements.

Boeing Earned Value Management (EVM) data were available to the IPT; the SLAMRAAM PM did not have to task DCMA to provide these data. Boeing data was also contained in the monthly EVM report delivered per the contract. The Boeing effort was in a separate Work Breakdown Structure (WBS) element and the Raytheon program management team provided whatever EVM data on Boeing that the SLAMRAAM PM requested.

In summary, even without an LOD in place, the SLAMRAAM PM received the required level of support from DCMA in regard to the Boeing subcontract. There is no evidence to suggest that the lack of an LOD affected the quality or quantity of information concerning subcontractor progress or status. There is no quantifiable evidence to correlate that a lack of the LOD affected the support provided, only qualitative opinion.

"DCMA did not have information needed to provide the project manager with informed recommendations regarding contractor progress toward attaining contract cost, schedule, and performance requirements (IG Report page 11)."

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The CMDS Project Office non-concurs with this statement.

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DCMA was and is a member of all SLAMRAAM IPTs and the SLAMRAAM Program Management Team (PMT). DCMA participates in all PMT meetings. DCMA delivers monthly reports to the PM that covers technical issues, programmatic issues, contract status, and Earned Value analyses. DCMA representatives were invited to many Raytheon internal reviews and the after action reports provided to the SLAMRAAM PM were timely and provided critical insight into program execution status.

DCMA did provide timely and meaningful insights consistently and routinely to the SLAMRAAM PM and the Project Manager, CMDS. All requests by the SLAMRAAM PM to refocus DCMA efforts or resources to better reflect program needs were accomplished in a timely manner. Any issues associated with the MOA, the surveillance plan, or LODs did not stand in the way of DCMA providing the required support, as and when needed.

"Without a focused and comprehensive MOA, supported by a surveillance plan and LODs, DCMA staff were not in a position to provide the Project Manager, CMDS with timely and meaningful insights and recommendations regarding the contractor progress toward attaining cost, schedule, and performance contract requirements for SLAMRAAM (IG Report page 15)."

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The CMDS Project Office non-concurs with this conclusion.

There is no quantifiable evidence to show that any issues with the MOA affected the support provided by DCMA or the quality or quantity of information provided concerning contractor progress and status. The quality of an MOA does not necessarily equate to quality support, nor can one conclude that problems with an MOA automatically equate to problems with the support. In this case there is no evidence that such a conclusion is valid.

"Recommendation C1: We recommend that the Commander, Defense Contract Management Agency Space Sensors and Communications Operations, Raytheon Integrated Defense Systems and the Project Manager, Cruise Missile Defense Systems revise the memorandum of agreement for the Surface-Launched Advanced Medium-Range Air-to-Air Missile to: a. Reference the current Defense Contract Management Agency Instruction and Defense Contract Management Agency Guidebook. b. Include an annex that documents a cause-and-effect analysis linking Defense Contract Management Agency performance metrics and standards to the customer-desired outcome, in accordance with the Defense Contract Management Agency Instruction (IG Report page 15)."

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The CMDS Project Office concurs. CMDS and DCMA are in the process of establishing a new MOA through the newly selected DCMA Program Integrator that will reflect current 2007 DCMA guidance. This MOA will reflect the more recent changes to the Performance Based Management process that have been made since the previous May 2006 MOA was issued, including lessons learned through the maturation of PBM within DCMA. DCMA Raytheon IDS plans on getting this new MOA signed in the fall of 2007.

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The CMDS Project Office has no comment on Recommendations C2 and C3 since these do not apply to CMDS.

6. **Finding D – Implementing Information Assurance Guidance**

"The SLAMRAAM Product Office changed to an information assurance strategy that does not comply with issued and approved DoD information assurance requirements. Specifically, the product office, at the direction of the U.S. Army Chief Information Officer, began following the unapproved DoD Information Assurance Certification and Accreditation Process (DIACAP) guidance that was in coordination within DoD, but not approved for implementation. The DoD Information Technology Security Certification and Accreditation Process (DITSCAP) remains the official DoD information assurance guidance. (IG Report page 16)."

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The CMDS Project Office concurs with this statement as written. However, the SLAMRAAM Program is following the direction issued by the Department of the Army and must continue to do so until directed otherwise. The SLAMRAAM Product Manager is taking all steps possible to ensure that the IA program does not place the information contained in the SLAMRAAM system at greater risk of loss, misuse, or unauthorized access to or modification of the information contained in the system.

"D.1. We recommend that the Army Chief Information Officer rescind all verbal or written direction given to Army acquisition program managers to follow the interim guidance on DoD Information Assurance Certification and Accreditation Program in developing weapon systems.

D.2. We recommend that the Product Manager, Surface-Launched Advanced Medium-Range Air-to-Air Missile return to following the DoD Information Technology Security Certification and Accreditation Process in developing the Surface-Launched Advanced Medium-Range Air-to-Air Missile, as documented in the information assurance strategy and in accordance with DoD Instruction 5200.40, "DoD Information Technology Security Certification and Accreditation Process (DITSCAP)," December 30, 1997. (IG Report page 19)"

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The CMDS Project office has no comment on the Recommendations. Recommendation D1 does not apply to CMDS. Recommendation D2 would require that the SLAMRAAM Product Manager ignore official Department of the Army direction.

APPROVED: Edward L. Mullin
COL, AD
Project Manager
CMDS Project Office

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Department of the Army, Director of Combat Developments, U.S. Army Air Defense Artillery School Comments

DEPARTMENT OF THE ARMY
HEADQUARTERS, U. S. ARMY AIR DEFENSE ARTILLERY SCHOOL
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REPLY TO
ATTENTION OF:

ATSA-CD

MEMORANDUM FOR Department of Defense Inspector General Office, 400 Army Navy Drive (Room 801) Arlington, VA 22202-4704

SUBJECT: USAADASCH DCD Comments to DRAFT Report on the Acquisition of Surface-Launched Advanced Medium-Range Air-to-Air Missile (Project No. D2007-DOOOAE-0060.000), August 17, 2007

1. References:

a. DRAFT Report on the Acquisition of Surface-Launched Advanced Medium-Range Air-to-Air Missile (Project No. D2007-DOOOAE-0060.000), August 17, 2007

2. Enclosure:
USAADASCH DCD Response to DoDIG Draft Audit Report ref (a) contains the finding and recommendation.

3. My point of contacts for this draft audit are [redacted] at (915) 568-[redacted] or by email at [redacted]@us.army.mil and [redacted] at (915) 568-[redacted] or by email at [redacted]@us.army.mil

FOR THE COMMANDANT:

Encl
as

HARRY L. COHEN
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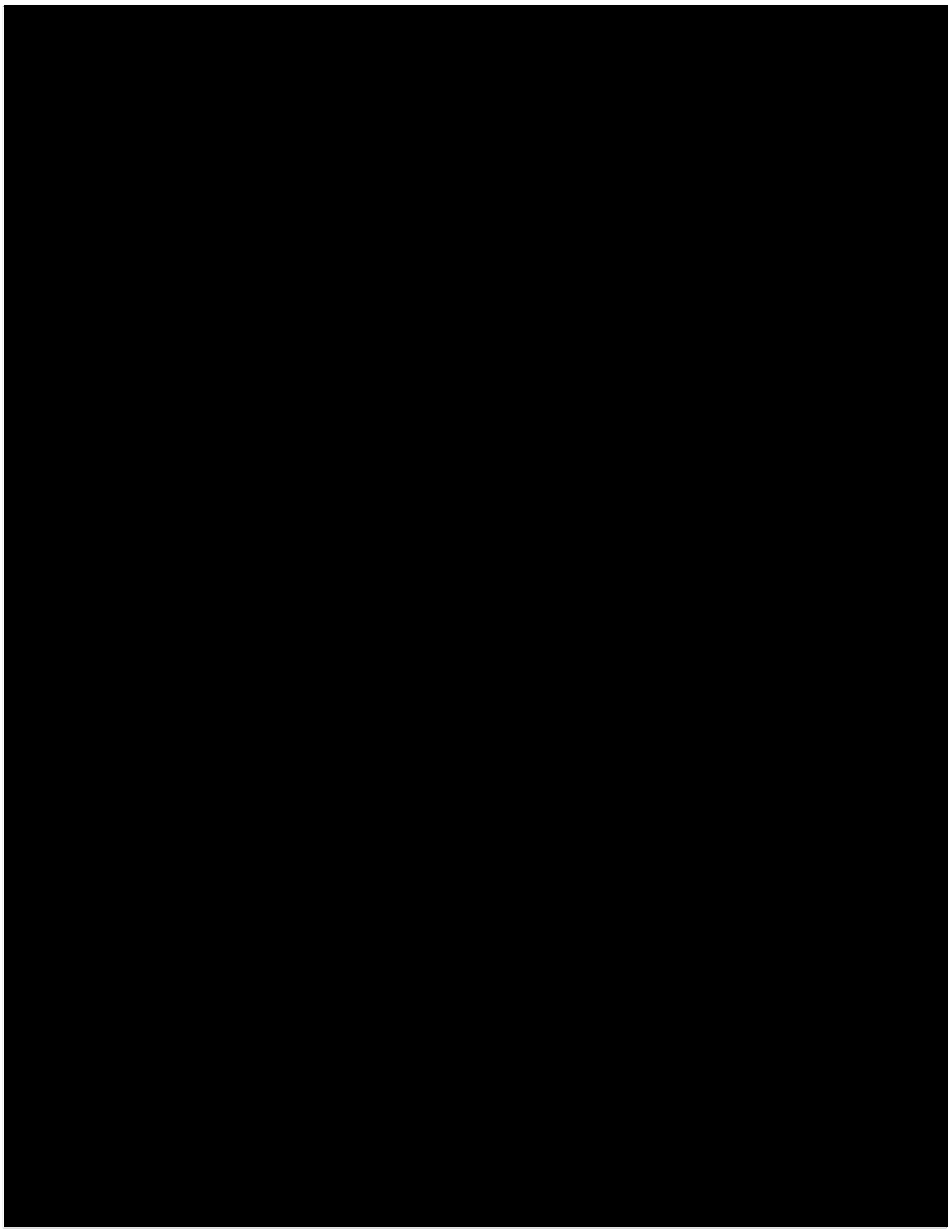

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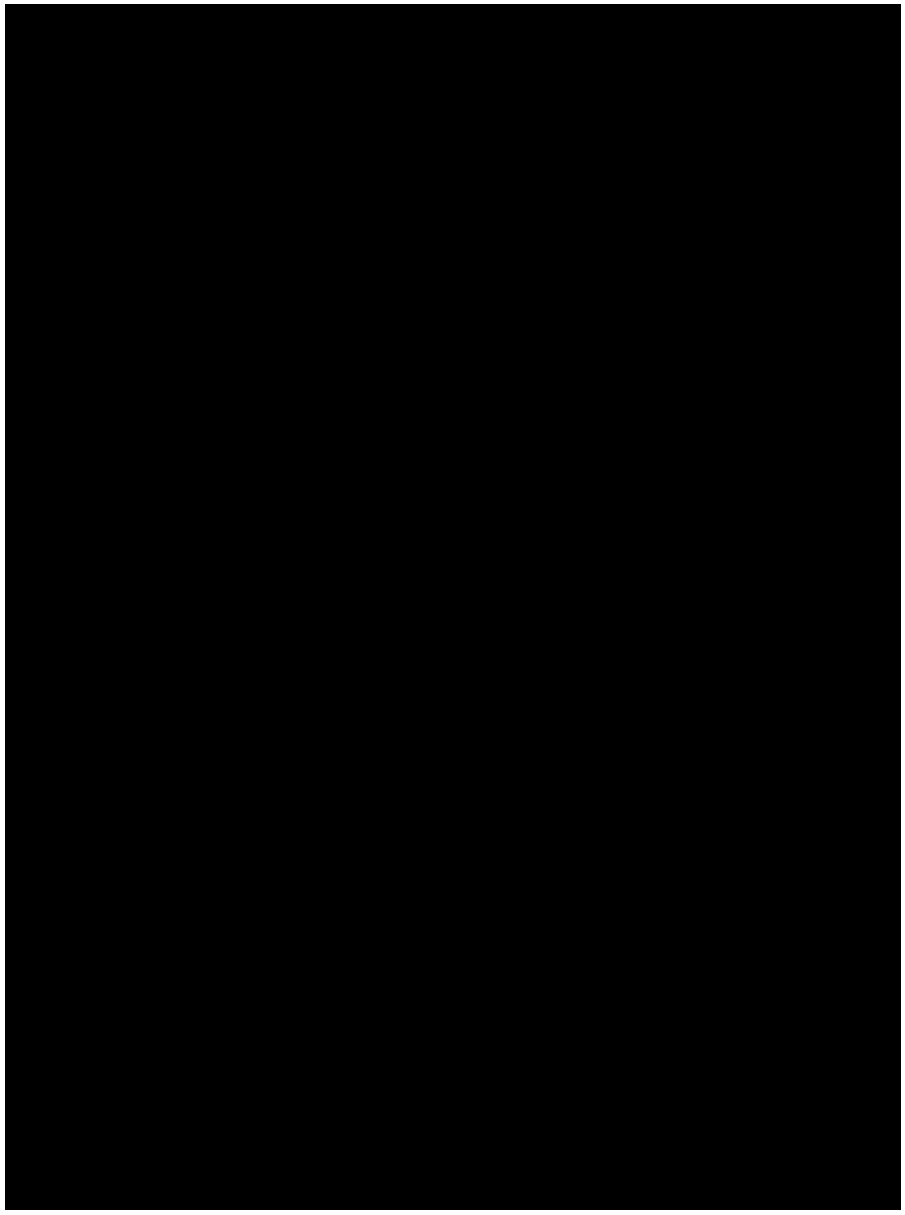

Enclosure (1)

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