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Report No. D-2010-082

September 10, 2010

# Inspector General

United States

Department of Defense



Implementation of the Predator/Sky Warrior  
Acquisition Decision Memorandum  
Dated May 19, 2008

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### Acronyms and Abbreviations

ACAT	Acquisition Category
ADM	Acquisition Decision Memorandum
CFR	Code of Federal Regulations
EO/IR	Electro-Optical/Infrared
ESG	Executive Steering Group
GAO	Government Accountability Office
ISR	Intelligence, Surveillance, and Reconnaissance
JCIDS	Joint Capabilities Integration and Development System
JROC	Joint Requirements Oversight Council
OIPT	Overarching Integrated Product Team
QDR	Quadrennial Defense Review
TEMP	Test and Evaluation Master Plan
UAS	Unmanned Aircraft System
USD(AT&L)	Under Secretary of Defense for Acquisition, Technology, and Logistics

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

September 10, 2010

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION,  
TECHNOLOGY, AND LOGISTICS  
ASSISTANT SECRETARY OF THE AIR FORCE  
(FINANCIAL MANAGEMENT AND COMPTROLLER)  
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

SUBJECT: Implementation of the Predator/Sky Warrior Acquisition Decision  
Memorandum Dated May 19, 2008  
(Report No. D-2010-082)

We are providing this report for your review and comment. We considered management comments on a draft of this report when preparing the final report.

DOD Directive 7650.3 requires that recommendations be resolved promptly. As a result of management comments, we deleted Recommendation 2, revised Recommendation 3, and renumbered Recommendations 3 and 4 as 2 and 3 respectively. The comments from the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics were partially responsive. Therefore, we request additional comments on the Recommendations 1, 2, and 3 by October 10, 2010.

If possible, send a .pdf file containing your comments to [audacm@dodig.mil](mailto:audacm@dodig.mil). Copies of your comments must contain the actual signature of the authorizing official for your organization. We are unable to accept the /Signed/ symbol in place of the actual signature. If you arrange to send classified comments electronically, you must send them over the SECRET Internet Protocol Router Network (SIPRNET).

We appreciate the courtesies extended to the staff. Please direct questions to me at (703) 604-9201 (DSN 664-9201).

Richard B. Jolliffe  
Assistant Inspector General  
Acquisition and Contract Management

cc:  
Under Secretary of Defense (Comptroller)/Chief Financial Officer  
Director, Cost Assessment and Program Evaluation

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## Results in Brief: Implementation of the Predator/Sky Warrior Acquisition Decision Memorandum Dated May 19, 2008

### What We Did

We evaluated whether the Air Force and the Army complied with the direction in the May 19, 2008, Acquisition Decision Memorandum (ADM) to combine the Air Force Predator and Army Sky Warrior programs into a single acquisition program to achieve common development, procurement, sustainment, and training activities.

### What We Found

The Predator, Sky Warrior, and Reaper are *Predator-class* Unmanned Aerial Systems (UAS) and are manufactured by the same contractor. Despite using the same primary contractor, the Air Force and the Army have not complied with the September 13, 2007, Deputy Secretary of Defense memorandum or the May 19, 2008, ADM to combine the Predator and Sky Warrior programs into a single acquisition program. Further, the Air Force and Army had not implemented adequate management controls to comply with Public Law 110-417, "Duncan Hunter National Defense Authorization Act for Fiscal Year 2009," section 144, October 14, 2008. This occurred because the Air Force was not committed to a single acquisition program as demonstrated by actions that were inconsistent with the May 19, 2008, ADM guidance. These actions included the Air Force zeroing out procurement funding for the Predator in FY 2010 and planning to transition to an all Reaper fleet. In addition, the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD(AT&L)) did not create a single acquisition program office responsible for a combined Predator/Sky Warrior program. The Air Force and the Army will not achieve a potential savings of \$400 million that the USD(AT&L) estimated would result from combining the Predator and

the Sky Warrior programs. Additionally, the Air Force plan to buy five Air Force unique MQ-1C aircraft, valued at \$60 million was canceled.

### What We Recommend

We recommend that the USD(AT&L) do the following.

- Determine whether the combination program is still valid; if so, establish a single acquisition category program designation with joint requirements and, develop an analysis of alternatives and acquisition strategy, and determine the optimum mix of aircraft to procure.
- Require the Air Force and Army to provide cost, schedule, and performance milestones for the development of the ground system architecture and conduct quarterly reviews.

### Management Comments and Our Response

The Director, Portfolio Systems Acquisition, responded for the USD(AT&L). As a result of his comments, we deleted draft Recommendation 2. We renumbered Recommendations 3 and 4 as 2 and 3. The Director's comments on Recommendations 1 and 2 were partially responsive. He proposed an alternative action for Recommendation 3 that met the intent of the recommendation. We request that the Director provide additional comments by October 10, 2010, on Recommendations 1, 2, and 3. The comments on Recommendation 1 should address the Reaper as a potential alternative for combining the programs, and the comments on Recommendation 2 should address the revised recommendation. The comments on Recommendation 3 should provide a date when the alternative action will be completed. Please see the recommendations table on the back of this page.

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### Recommendations Table

Management	Recommendations Requiring Comment	No Additional Comments Required
Under Secretary for Defense for Acquisition, Technology, and Logistics	1, 2, and 3	

Please provide comments by **October 10, 2010**.

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## Table of Contents

<b>Introduction</b>	1
Objectives	1
Background	1
Review of Internal Controls	3
<b>Finding. Predator/Sky Warrior Combination</b>	5
Recommendations, Management Comments, and Our Response	15
<b>Appendices</b>	
A. Scope and Methodology	18
Prior Coverage	19
B. Laws and DOD Guidance	20
C. September 13, 2007, Deputy Secretary of Defense Memorandum	24
D. May 19, 2008, Acquisition Decision Memorandum	25
E. Status of Air Force and Army Compliance With the Acquisition Decision Memorandum	27
F. Oversight Structure for Combining Predator and Sky Warrior Programs	29
<b>Management Comments</b>	
Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics	32

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## Introduction

### Objectives

The overall audit objective was to determine the implementation status of the May 19, 2008, Acquisition Decision Memorandum (ADM). The specific objectives were to evaluate whether the Air Force and the Army complied with the May 19, 2008, ADM and whether they considered alternatives such as the Reaper program.

We performed this audit pursuant to Public Law 110-181, "The National Defense Authorization Act for Fiscal Year 2008," section 842, "Investigation of Waste, Fraud, and Abuse in Wartime Contracts and Contracting Processes in Iraq and Afghanistan," January 28, 2008. Section 842 requires "thorough audits . . . to identify potential waste, fraud, and abuse in the performance of (1) Department of Defense contracts, subcontracts, and task and delivery orders for the logistical support of coalition forces in Iraq and Afghanistan; and (2) Federal agency contracts, subcontracts, and task and delivery orders for the performance of security and reconstruction functions in Iraq and Afghanistan." This audit supports DOD's efforts in Southwest Asia, where unmanned aircraft systems (UASs) are used for intelligence, surveillance, and reconnaissance (ISR) missions. See Appendix A for a discussion of scope and methodology, and prior audit coverage.

### Background

The history of the May 19, 2008, ADM dates back to the 2005 deliberations on the Quadrennial Defense Review. During the 2005 Quadrennial Defense Review, the Joint Capability Enabler Integrated Product Team recommended combining acquisition programs of similar capability. The Air Force Predator and the Army Sky Warrior programs were identified as potential candidates. The Quadrennial Defense Review report, published February 2006, stated that to build on progress to date, Military Service-focused efforts should shift toward a more Department-wide net-centric approach. The Quadrennial Defense Review report projected that 45 percent of the future long-range strike force would be unmanned. Consequently, combining the Predator and Sky Warrior programs is critical because it establishes the framework for UAS commonality and standardization.

The initiative to develop a common UAS has been supported in various laws and memoranda from the Office of the Secretary of Defense, the Air Force, and the Army. Appendix B identifies the laws that have been issued concerning UAS consolidations and lists DOD guidance supporting the need for combining and standardizing the systems.

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### **Predator-Class Unmanned Aircraft Systems**

The Predator, Sky Warrior, and Reaper are *Predator-class* UASs and are manufactured by General Atomics Aeronautical Systems Inc. (General Atomics). A UAS includes aircraft, a ground control station, and a communication suite. All three aircraft are used for ISR and in varying capacities perform a hunter-killer role. Table 1 identifies the various characteristics of the aircraft, along with their costs.

**Table 1. Aircraft Characteristics**

Item	Predator (MQ-1B)	Sky Warrior (MQ-1C)	Reaper (MQ-9)
Categorization	Medium-altitude, long-endurance UAS	Medium-altitude, extended-range UAS	Medium-to-high altitude, long-endurance UAS
Primary Function	Armed reconnaissance, airborne surveillance, and target acquisition	Long-dwell, wide-area reconnaissance, surveillance, target acquisition, communications relay, and attack missions	Persistent hunter-killer weapon system and ISR
Maximum Altitude	25,000 ft	25,000 ft	50,000 ft
Speed	135 mph	172 mph	276 mph
Endurance	24 hours	30 hours	24 hours
Unit Cost	\$3.5 million	\$6.3 million	\$10.4 million
System Cost	\$20.8 million	\$40.0 million	\$48.4 million
Inventory	288 Current (288=Program Total Projection)	21 Current (163=Program Total Projection)	67 Current (319=Program Total Projection)
Initial Operational Capability	March 2005	April 2008	October 2007
Program Cost (Prior - FY 2009)	\$3,420 million	\$775 million	\$1,688 million
Program Cost (FY 2010 - FY 2015)	\$1,170 million	\$1,756 million	\$10,254 million

Source: Information for the table was obtained from various DOD sources including the Unmanned Systems Roadmap, Air Force fact sheets, and briefing charts and other documents provided by Air Force and Army program office officials.

### **September 13, 2007, Deputy Secretary of Defense Memorandum and May 19, 2008, Acquisition Decision Memorandum**

The September 13, 2007, Deputy Secretary of Defense memorandum requires the Predator and Sky Warrior programs to be combined into a single acquisition program, with a common data link, to achieve common development, procurement, sustainment, and training activities. The Department was to migrate to a single contract by October 2008. The Under Secretary of Defense for Acquisition, Technology, and Logistics (USD[AT&L]) issued the May 19, 2008, ADM because the Air Force and the Army

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compliance with the Deputy Secretary of Defense's direction had not been fast enough, and significant work remained to accomplish this direction. See Appendices C and D for copies of these memoranda.

The May 19, 2008, ADM emphasizes the need for the Air Force and the Army to increase interoperability and commonality through the delivery of a common MQ-1C. The ADM requires the Air Force and the Army to resolve hardware differences with a joint plan and includes language for a common MQ-1C to support operations in Southwest Asia. The ADM requires the Air Force and the Army to procure the maximum number of common MQ-1Cs from a single contract with FY 2009 funding, taking into account risk factors, production ramp-up timelines, and force structure mix.

The May 19, 2008, ADM designates the Predator and Sky Warrior programs as Acquisition Category ID programs and directs the Air Force and the Army to continue to explore options and schedules for combining the two programs into a single Acquisition Category (ACAT) ID program. Programs designated as Acquisition Category ID undergo additional review and consideration by the Office of the Secretary of Defense, specifically the USD(AT&L) and the Defense Advisory Board. The USD(AT&L) is responsible for making critical acquisition decisions, and documents these decisions in an ADM.

#### ***Quadrennial Defense Review***

The Quadrennial Defense Review Report (QDR) that DOD issued in February 2010 noted that long-dwell UASs, such as the Predator, Reaper, and other systems, have proven to be invaluable for monitoring activities in contested areas, enhancing situational awareness, protecting our forces, and assisting in targeting enemy fighters. According to the report DOD made a commitment to grow the capacity of Predator/Reaper. The report also stated that in FY 2011 the Air Force will be on track to obtain 50 orbits with the Predator/Reaper and the capacity will continue to expand to 65 orbits by FY 2015. The Army is expanding all classes of UASs, including the accelerated production of the *Predator-class* Sky Warrior UAS.

#### **Review of Internal Controls**

We determined that control weaknesses as defined by DOD Instruction 5010.40, "Managers' Internal Control (MIC) Program Procedures," January 4, 2006, existed in the processes to implement the Predator and Sky Warrior combination. The Office of the USD(AT&L), the Air Force, and the Army did not have adequate controls for implementing the direction in the September 13, 2007, Deputy Secretary of Defense memorandum or the May 19, 2008, ADM. Public Law 111-23, "Weapons Systems Acquisition Reform Act of 2009," section 139c, May 22, 2009, contains requirements for assessment of alternative plans, programs, and policies with respect to the acquisition programs of the Department of Defense. Further, Public Law 110-417, "Duncan Hunter National Defense Authorization Act for Fiscal Year 2009," section 144, October 14, 2008, contain requirements affecting UASs. Specifically, the management controls were not adequate for ensuring that the programs were combined in a timely and cost-effective manner and that plans, goals, and milestones were established for the development and

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delivery of a common MQ-1C aircraft. However, USD(AT&L) issued a revised ADM on June 18, 2010, that states that the Air Force is no longer required to procure MQ-1C aircraft from a common contract with the Army as directed in the May 19, 2008, ADM. Implementing Recommendation 2 will improve management controls for the development of the ground control station. We will provide a copy of the report to the Office of the USD(AT&L) responsible for internal controls.

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## **Finding. Predator/Sky Warrior Combination**

The Air Force and the Army did not initiate or complete various requirements of the acquisition process that were needed to combine the Predator/Sky Warrior program into a single acquisition program. Specific acquisition requirements not initiated or completed included the acquisition strategy, test and evaluation master plan, analysis of alternatives, or the Joint Capabilities Integration and Development System (JCIDS) process. By not initiating the required acquisition activities the Air Force and the Army have not complied with the September 13, 2007, Deputy Secretary of Defense memorandum or the May 19, 2008, ADM to combine the Predator and Sky Warrior programs into a single acquisition program. In addition, the Air Force and Army had not implemented adequate management controls to comply with Public Law 110-417, "Duncan Hunter National Defense Authorization Act for Fiscal Year 2009," section 144, October 14, 2008. This occurred because:

- The Air Force was not committed to a single acquisition program as demonstrated by actions that were inconsistent with the May 19, 2008, ADM guidance. These actions included the Air Force zeroing out procurement funding for the Predator in FY 2010 and planning to transition to an all Reaper fleet.
- USD(AT&L) did not create a single acquisition program office responsible for a combined Predator and Sky Warrior program.

The Air Force and the Army did not make effective use of an estimated \$115 million spent on pursuing the combination from FY 2008 through FY 2009. The Air Force and the Army will not maximize the return to the warfighter or on funds designated or spent in the future. In addition, the \$400 million that the USD(AT&L) estimated would be saved from combining the programs will not be realized if the combination does not occur.

## **Acquisition Decision Memorandum Guidance**

In January 2006 the Air Force and the Army Chiefs of Staff agreed to converge programs with complementary capabilities including the Predator and Sky Warrior programs. Further, in February 2008 the Air Force and Army Program Management Offices signed an agreement to leverage commonality in the development and acquisition of a common MQ-1C. See Appendix B for a list of Laws and DOD Guidance. Consistent with the two agreements the Deputy Secretary of Defense directed the Air Force and Army to combine the Predator/Sky Warrior programs into a single program. On September 13, 2007, the Deputy Secretary of Defense issued a memorandum that required the Predator and Sky Warrior programs to be combined into a single acquisition program. The May 19, 2008, ADM reemphasized the direction in the September 13, 2007, Deputy Secretary of Defense memorandum for the Air Force and the Army to combine the Predator and Sky Warrior programs into a single acquisition program to achieve common development, procurement, sustainment, and training activities. The May 19, 2008, ADM required the Air Force and the Army to develop an acquisition strategy, transition to a common

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MQ-1C airframe and contract, develop a common test and evaluation master plan, develop common hardware components, and procure the optimum mix of aircraft.

## **Compliance with the Acquisition Decision Memorandums**

We determined compliance with the May 19, 2008, ADM's directions and whether the Air Force and the Army efforts resulted in streamlining acquisition between the two programs. See Appendix E for a listing of the May 19, 2008, ADM's action items, audit determinations regarding compliance, the status of the action items as reported by the Air Force and the Army, and comments from the Air Force and the Army. See Appendix F for an understanding of the oversight structure for combining the Predator and Sky Warrior programs.

The Air Force and the Army officials briefed staff in several offices within the Office of the USD(AT&L) on the status of their combination activities. Air Force and Army officials indicated that there were opportunities for the Office of USD(AT&L) to raise concerns on the commonality issues during these briefings. The Air Force and the Army briefed the Overarching Integrated Product Team (OIPT) and addressed whether the May 19, 2008, ADM action items were open, requested to close, or closed. Additionally, the Air Force and the Army requested approval from the OIPT for closing the action items. Our review disclosed that the OIPT forwarded memoranda to the USD(AT&L) with recommendations on the action item because the OIPT lacked the authority to make the final decisions regarding the combination of the Predator/Sky Warrior programs.

According to the Assistant to the Deputy Director for Unmanned Warfare (in the Office of the USD(AT&L)), the OIPT did not have decision making authority over the Air Force and the Army. This was consistent with Title 32, Code of Federal Regulations, section 382.5 (32 CFR sec. 382.5 [2002]), which states the USD(AT&L)'s decisions shall be reflected in an ADM issued by the USD(AT&L) for implementation by the Heads of DOD Components. The authority of the USD(AT&L) under this paragraph may not be delegated by the USD(AT&L). Although the OIPT reviewed and made recommendation on the action items, the Air Force and Army should have continued to pursue the common program as directed in the May 19, 2008, ADM.

Little progress was made in establishing a single program. Specifically, the Air Force and Army did not initiate or complete various requirements of the acquisition process needed to establish a common program including an acquisition strategy, test and evaluation master plan, alternatives of analysis, or the JCIDS process. In Congressional testimony on March 23, 2010, the Government Accountability Office (GAO) noted that the Air Force and Army had not effectively collaborated on their Sky Warrior and Predator programs, and greater commonality could have been achieved given that the Sky Warrior is a variant of the Predator and is being developed by the same contractor. The GAO also noted that the individual services continued to drive requirements and make independent resource allocation decisions. The GAO stated that in many cases, the services had established requirements so specific that they demanded service-unique solutions, thereby precluding opportunities for commonality.

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### ***Acquisition Strategy***

Neither the Air Force nor the Army updated its acquisition strategy for a common MQ-1C as the May 19, 2008, ADM directs. The Air Force did not present an acquisition strategy because it planned to move to the Reaper platform and discontinue production of the Predator. The Army presented an updated acquisition strategy for its Sky Warrior in January 2009. We believe the Army did not develop an acquisition strategy for a common MQ-1C because the Army was aware the Air Force no longer planned to procure the Air Force Predator aircraft. If the Air Force and the Army had established standard requirements for the common MQ-1C, an acquisition strategy for the common MQ-1C could have been developed.

In December 2009 the Assistant to the Deputy Director for Unmanned Warfare stated that the requirement for a common MQ-1C has been superseded during the budget process, with the Air Force decision to zero out Predator procurement funds in FY 2010. We agree this budgetary decision on Predator production will affect the Predator and Sky Warrior programs. However, the Air Force has not provided an exit strategy for the Predator. Further, the Air Force's decision to discontinue Predator production may conflict with DOD Instruction 5000.02, "Operation of the Defense Acquisition System," December 8, 2008. This Instruction prohibits terminating or substantially reducing participation in joint ACAT ID programs without Requirements Authority review and the USD(AT&L)'s approval. In addition, the QDR discussed growing the capacity of the Predators/Reapers to 50 sustained orbits by FY 2011 and continuing to grow to 65 orbits by 2015. Even if the Air Force's decision to discontinue Predator production did not conflict with DOD Instruction 5000.02 or the QDR, the May 19, 2008, ADM still contains requirements for the electro-optical/infrared (EO/IR) sensor, data link, and ground control station, which are subject to subsequent ADMs and public laws and also apply to the Reaper and other UASs.

### ***Common MQ-1C Airframe***

The Air Force has not made the transition to a common airframe, and the Air Force and the Army do not have a common airframe contract. The May 19, 2008, ADM required the Air Force to transition to a common airframe by January 2009, and the Air Force and the Army to use a common airframe contract as soon as possible to achieve quantity efficiencies. Further, the ADM stated that FY 2009 funds may be used only to purchase common airframes unless the USD(AT&L) grants a waiver.

In July 2008, the Air Force requested a waiver from the USD(AT&L) allowing the Air Force to procure up to 20 Predator aircraft using FY 2009 funding rather than acquire common MQ-1C airframes as initially directed. In October 2008, the USD(AT&L) approved the Air Force's request to procure these 20 Predator aircraft on the condition that the Air Force procure five common MQ-1C aircraft using a common contract with the Army. In response, the Air Force issued a request for proposal to General Atomics requiring five Air Force unique MQ-1C aircraft and four Army unique MQ-1C aircraft. In February 2009, General Atomics submitted its proposal to the Air Force for review.

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However, the General Atomics proposal included two statements of work with unit price differences between the Air Force and the Army aircraft, which is inconsistent with a common contract approach. Government Accountability Office Report No. 09-520, "Defense Acquisitions - Opportunities Exist to Achieve Greater Commonality and Efficiencies among Unmanned Aircraft Systems," July 2009, also addresses the lack of commonality in the two systems. The report states that the Predator and the Sky Warrior have little in common and have missed opportunities to achieve commonality and efficiencies, including the commonality of their airframes.

We informed USD(AT&L) officials and the Air Force Executive Steering Group (ESG) cochair about the differences in the airframes. All these officials stated that they were unaware of the differences in the airframes. Without a common contract proposal, the Air Force and the Army were not in compliance with the USD(AT&L)'s direction in the May 19, 2008, ADM. The lack of a common airframe and a common contract underscores the need to establish internal controls for monitoring compliance with the May 19, 2008, ADM and executing the combination.

#### ***Common Test and Evaluation Master Plan***

The Air Force and the Army did not prepare a common Test and Evaluation Master Plan (TEMP). The May 19, 2008, ADM directs the Air Force and the Army to establish an MQ-1C Integrated Test Team and submit the plan within 90 days. On August 1, 2008, the Air Force and the Army sent a memorandum to the OIPT stating that the MQ-1C Integrated Test Team had been established and that the team was coordinating with test organizations in the Office of the USD(AT&L) to meet the May 19, 2008, ADM direction for a common TEMP. When asked to provide a copy of the common TEMP, an Air Force official responded that there is no longer an expectation for the Air Force and the Army to produce a common TEMP. Since the Air Force and Army consider the May 19, 2008, ADM guidance to combine the programs no longer valid there are no plans to submit a common TEMP.

#### ***Common Hardware Components***

The May 19, 2008, ADM directs the Air Force and the Army to develop fully common hardware components for the EO/IR sensor ball and data link, and develop a common ground control segment interface standard.

#### ***Electro-Optical/Infrared Sensor Ball and Data Link***

Since 2006 the Air Force and the Army have been directed by the Deputy Secretary of Defense and the USD(AT&L) to address jointness and commonality issues. Public Law 110-417 requires procurement of common payloads by vehicle class, including electro-optical and synthetic aperture radar. When he issued the May 19, 2008, ADM, the then USD(AT&L) was "not satisfied with the progress on common EO/IR sensor ball and data-link components for Predator and Sky Warrior." The May 19, 2008, ADM directs the Air Force and the Army to accelerate efforts to resolve differences in the EO/IR sensor ball and data link components, and to return in 90 days with a joint plan achieving fully common components for these subsystems, including cost and schedule effects. The

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May 19, 2008, ADM states that any noncommon aircraft hardware should obtain a waiver from the USD(AT&L).

In September 2008, the Air Force and the Army presented their plan to the OIPT for the EO/IR sensor ball and data link. The Air Force and Army presentations identified commonality options, and cost and schedule options for the components instead of a joint plan as required by the May 19, 2008, ADM. Table 2 illustrates the options the Air Force and the Army presented to the OIPT.

**Table 2. Estimated Commonality, Cost, and Schedule Delays for Common Components as Presented on September 15, 2008**

Item	EO/IR Sensor Ball			Data Link	
	Current	Option 1	Option 2	Current	Option 1
Percentage of Commonality	80%	95%	95%	40%	90%
Cost (millions)	\$2,030.20	\$2,382.20	\$3,253.40	\$606.20	\$641.20
Schedule Delays	None	2 Years	None	None	4 Years

The presentation did not result in an OIPT recommendation to the USD(AT&L) on how to proceed with developing the common hardware components. The Air Force and the Army gave briefings on the EO/IR sensor ball and data link to the OIPT and the USD(AT&L) in March and April 2009, respectively. In both briefings, the Air Force and the Army showed the same set of options they had presented in the September 2008 meeting. For the data link, the Air Force and the Army asked the USD(AT&L) to close the action item, explaining that it would require an additional \$35 million and an additional 4 years to complete Predator retrofitting with no increased interoperability. Again, the Air Force and the Army did not present a plan with cost and schedule effects for achieving a fully common EO/IR sensor ball and data link. Furthermore, the Air Force and the Army did not support the cost estimates they presented to the OIPT. The Air Force stated that the cost estimates were "rough order values." The percentage of commonality was obtained from the equipment manufacturers and subsequently adjusted by a program manager. We were unable to determine the validity of the estimates because the Air Force and the Army did not provide supporting documentation.

In August 2009, the USD(AT&L) issued another ADM directing the Air Force and the Army to develop and field a highly common EO/IR sensor ball emphasizing the importance of joint capabilities with cost and schedule effects. In September 2009, the Air Force and the Army presented to the OIPT their intention to purchase a highly common EO/IR sensor with deliveries scheduled for FY 2013. The Air Force and the Army stated that the OIPT agreed with the plan, and the OIPT closed this action item. Also, in the September 2009 OIPT briefing, the Air Force and the Army requested relief for the common data link. The Air Force and Army considered the item closed since the

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OIPT recommended closure to the USD(AT&L). However, according to 32 CFR sec. 382.5 (2002), the authority of the USD(AT&L) cannot be delegated; therefore, the OIPT lacked authority to close the action items.

### **Ground Segment Interface**

The Air Force and the Army have not finalized a plan for a common ground segment interface standard. The May 19, 2008, ADM directs the Air Force and the Army, in coordination with the UAS Task Force, to develop a common ground segment interface standard that supports all system functions between the ground segment and the aircraft and payloads. The Air Force and the Army are also to provide an update on efforts to achieve maximum commonality for the ground segment interface. Public Law 110-417 requires policy and acquisition strategy for commonality of ground system architecture by vehicle class, ground system interoperability standardization, and competitive procurement. The Army stated that it targeted a Level II Interoperability Standard.\* The Air Force stated that it did not develop a common ground segment interface standard supporting all system functions before February 2009.

On February 11, 2009, the USD(AT&L) published another ADM expanding the common ground segment interface standard to the Air Force, the Army, and the Navy. The February 11, 2009, ADM requires a joint effort to develop and demonstrate a common, open, and scalable UAS architecture with an interface standard. The Air Force and the Army stated that they delivered an initial framework for the ground segment standard through version 0.5 in December 2009, and planning continues.

### **Air Force UAS Plan for Optimum Mix of Aircraft**

The May 19, 2008, ADM directs the Air Force to plan to procure the optimum mix of Predators and Reapers within existing manufacturing capability for FY 2008 to support operations in Southwest Asia. When asked to provide methodology and plans for the procurement, the former Air Force Branch Chief of the Predator/Reaper stated that the Strategic Command was developing an ISR force mix study to be used in planning the optimum mix. However, Strategic Command officials directed us to the District Intelligence and Operations Coordination Center, whose officials stated the ISR force mix study would not recommend the quantity or type of aircraft the Air Force should procure. The Air Force reported 24 Predators and 20 Reapers were procured with FY 2008 funds but could not provide source documents supporting how the procurement optimized the mix of Predators and Reapers within existing manufacturing capability in support of operations in Southwest Asia.

Additionally, the Air Force and the Army have not procured the maximum number of common MQ-1C aircraft using a single contract. The May 19, 2008, ADM instructs the Air Force and the Army to procure from a single contract the maximum number of

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\* Interoperability levels range from Level I to Level V. Level II is the second lowest level of interoperability.

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common MQ-1C aircraft achievable. The Air Force explained it would procure five MQ-1Cs based on the October 28, 2008, memorandum from the USD(AT&L). This memorandum allowed the Air Force to procure 20 Predators on the condition that five MQ-1Cs be procured to facilitate the Air Force's transition to a common MQ-1C. The Air Force did not provide information supporting plans to procure a maximum number of common MQ-1C aircraft from a single contract. The Army stated that, without the Air Force commitment to procure the common MQ-1C, the intended efficiencies will not be achieved. As a result, the Army continues to focus resources on developing and procuring its own MQ-1C.

The Air Force did not make an MQ-1C production transition decision. The May 19, 2008, ADM directs the Air Force and the Army to return in January 2009 and address the Air Force MQ-1C production transition decision, progress on common components, production capacity, life-cycle cost and schedule effects, and future management structure. The Army returned to the USD(AT&L) in January 2009 to obtain approval to procure four Sky Warrior production-ready test assets and presented a Sky Warrior program update, including a briefing on the Army's revised acquisition strategy. The Air Force did not address the production transition decision, explaining that analysis supporting a transition decision for the common MQ-1C was halted when the Air Force decided to procure an all-Reaper fleet. The Air Force decision to transition to an all-Reaper fleet was made in spite of direction from the Deputy Secretary of Defense and the USD(AT&L) and contrary to the Air Force's prior commitments in memoranda of agreement and understanding identified in Appendix B. In addition, the QDR issued in February 2010 discussed growing the capacity of the Predators/Reapers to 50 sustained orbits by FY 2011 and continuing to grow to 65 orbits by 2015. Without the Air Force committing to an MQ-1C production transition decision and a supportable production plan for Predator-class aircraft, the Air Force and the Army could not make the transition to a common MQ-1C.

## **Use of the Joint Capabilities Integration and Development System**

The Office of the USD(AT&L), the Air Force, and the Army (including the joint organizations) have not followed through on joint commitments for developing requirements increasing operational capability and interoperability through delivery of a common MQ-1C. Various memoranda from January 2006 through October 2008 provide direction on joint activities for UASs. For example, the September 13, 2007, Deputy Secretary of Defense memorandum instructs the USD(AT&L) and the Chairman of the Joint Chiefs of Staff to develop interoperability profiles for incorporation in the JCIDS. Further, a joint concept of operations was published in November 2008 to provide fundamental guidance for joint operations of UASs. Appendix B summarizes DOD guidance for joint activities regarding the combination beginning January 2006.

Chairman of the Joint Chiefs of Staff Instruction 3170.01F, "Joint Capabilities Integration and Development System," May 1, 2007, establishes policies and procedures for the JCIDS process. The JCIDS supports the Chairman of the Joint Chiefs of Staff and

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the Joint Requirements Oversight Council (JROC). Chairman of the Joint Chiefs of Staff Instruction 3170.01F states:

1. The JCIDS process was created to support the statutory requirements of the JROC to validate and prioritize joint warfighting requirements . . . . The primary objective of the JCIDS process is to ensure the joint warfighter receives the capabilities required to successfully execute the missions assigned to them. This is done through an open process that provides the JROC the information they need to make decisions on required capabilities.
2. Recognizing that not all capabilities/weapon systems require the same level of consideration, the JCIDS process is tailorable. The JROC has identified several alternative paths to allow accelerated identification of capability gaps and potential solutions, and to allow them to enter into the JCIDS process at the appropriate stage to deliver those capabilities more rapidly.

Neither the Air Force nor the Army followed through on a tailorable JCIDS process for a common MQ-1C or related hardware. The Air Force stated that the common MQ-1C did not require JCIDS validation because the Air Force considered its MQ-1C an upgrade to the Predator. The Army prepared JCIDS documentation for the Sky Warrior, but did not collaborate on developing a tailorable JCIDS process for a common MQ-1C with the Air Force. Further, the Air Force and the Army position is that there have never been JCIDS-approved requirements for a common MQ-1C aircraft, EO/IR sensor, data link, or ground control station and that the May 19, 2008, ADM does not provide a threshold definition for commonality. Also the Air Force and the Army explained that forcing commonality can be difficult and wasteful as their two separate programs mature. However, the Air Force and the Army should have pursued the JCIDS process as part of their efforts to comply with the September 13, 2007, Deputy Secretary of Defense memorandum and the May 19, 2008, ADM.

### **Consideration of Alternatives**

The Air Force and the Army have not considered all *Predator-class* system alternatives, such as the Air Force Reaper, throughout the combination activities. Public Law 111-23 requires an assessment of alternative plans, programs, and policies with respect to the acquisition programs of the Department of Defense. DOD Instruction 5000.02 requires an analysis of alternatives throughout the acquisition life cycle. The Assistant to the Deputy Director for Unmanned Warfare stated that the Reaper was not originally considered in the combination. On June 13, 2007, the Deputy Secretary of Defense issued a memorandum directing the Air Force and the Army to identify and quantify the efficiencies in development, procurement, sustainment, and training related to pursuing a common acquisition program for *Predator-class* UASs. The memorandum directed the Air Force and the Army to present their proposed common program to the Deputy Secretary's Advisory Working Group. We were unable to locate a copy of the presentation to the Advisory Working Group. However, based on the Deputy Secretary of Defense discussions with the Advisory Working Group on September 13, 2007, he issued another memorandum directing the Predator and Sky Warrior programs to

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combine into a single program. The direction from the Deputy Secretary of Defense gave the Air Force and the Army the opportunity to consider alternatives for combining the programs. The May 19, 2008, ADM requires the ESG to continue to develop options and schedules to support the combination of the two programs into a single ACAT ID program. The Office of the USD(AT&L), the Air Force, and the Army agree similarities exist among the Predator, Sky Warrior, and Reaper. Memoranda issued after the May 19, 2008, ADM include Reaper as part of DOD's effort to enhance interoperability and commonality among UASs. Therefore, opportunities still exist for improving interoperability and commonality among all *Predator-class* systems.

### **Designation of a Program Official**

In issuing the May 19, 2008, ADM, the USD(AT&L) directed the Air Force and the Army to work together in achieving common development, procurement, sustainment, and training activities and to deliver commonality and interoperability. However, the USD(AT&L) did not assign responsibility to a single organization for overseeing and monitoring the May 19, 2008, ADM or the combination effort. Instead, various working groups and task forces all have roles in overseeing the combination activities. As previously discussed, the Air Force and the Army requested approval from the OIPT for closing the action items in the May 19, 2008, ADM. However, the OIPT did not have decisionmaking authority and could only make recommendations to the USD(AT&L), in accordance with 32 CFR sec. 382.5 (2002). The combination's oversight structure is described in detail in Appendix F. As discussed in this report, this structure has had limited success in complying with the May 19, 2008, ADM.

To facilitate accomplishment of the May 19, 2008, ADM tasks and provide adequate management control, the USD(AT&L) should have designated a single organization for the combination program. Delegating responsibility for the May 19, 2008, ADM and combination program to a single organization with a designated program manager or acquisition executive would have provided accountability and improved cost, schedule, and performance reporting.

### **Benefits of a Common Aircraft**

We estimate about \$115 million was spent on research, development, test, and evaluation for the combination effort in FYs 2008 and 2009. The Air Force and the Army do not track combination activity costs. The cost of the combination effort is recorded in the Army's Sky Warrior budget and the Air Force's Predator program budget. Therefore, we based our estimate on analysis of FYs 2008 and 2009 appropriations for research, development, test, and evaluation compared with amounts contained in the 2010 DOD budget request. Spending continues on some aspects of the program without clear decisions or time frames. In a November 8, 2006, memorandum, the USD(AT&L) cited the potential to save at least \$400 million by combining the Predator and Sky Warrior programs. The savings would result from a single production line, reduced engine maintenance, and reduced aircraft attrition. The amount does not include all potential benefits from continuous improvements such as supply chain management, acquisition streamlining, and sustainment activities.

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## **Cancelation of Five MQ-1C Aircraft**

In October 2008, the USD(AT&L) directed the Air Force to procure five common MQ-1C aircraft using a common contract with the Army. While the Air Force was reviewing the General Atomics proposal for the aircraft, an official working for the Assistant Secretary of the Air Force (Acquisition) reported to the Deputy Under Secretary of Defense (Acquisition and Technology) that his office could not project cost savings in executing a common contract with the Army and that adding a limited quantity of Air Force MQ-1C aircraft to the Air Force's current UAS fleet would create interoperability and sustainment problems. The Air Force's Air Combat Command and acquisition office were also not able to elaborate on how these five aircraft would be used after delivery. Further, at the time of the audit, the Air Force no longer planned to procure additional UASs of this class and planned to transition to an all-Reaper fleet.

In April 2009, we informed Office of the USD(AT&L) and Air Force officials that the planned procurement of these five Air Force MQ-1C aircraft was not prudent. In June and July 2009, we presented our concerns about the Air Force's procurement of the five MQ-1C aircraft to the Deputy Director for Unmanned Warfare and to Program Analysis and Evaluation officials. We explained that the Air Force did not have plans to use the five MQ-1C aircraft. We also raised concerns about whether the Secretary of Defense, relying on Air Force information, could certify that the contract would achieve cost savings as required by the Public Law 110-329, "Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009," section 8094c, September 30, 2008. The Air Force could not project cost savings from the contract. Subsequently, the Air Force asked the USD(AT&L) to rescind the direction to procure the five MQ-1C aircraft, and the Under Secretary of Defense (Comptroller)/Chief Financial Officer reprogrammed the \$60 million in FY 2009 funds budgeted for the five aircraft. These funds were to be directed to higher priority ISR operations.

## **Summary**

The Air Force and the Army have not complied with the direction in the September 13, 2007, Deputy Secretary of Defense Memorandum and the May 19, 2008, ADM to combine the Predator and Sky Warrior programs. The Air Force and the Army could have a single acquisition program if they had successfully updated their acquisition strategies for a common MQ-1C, transitioned to a common airframe and contract, used a common test plan, developed fully common hardware components, procured the optimum mix of aircraft, and used the JCIDS. However, the Air Force was not committed to a single acquisition program as demonstrated by actions that were not consistent with the May 19, 2008, ADMs guidance. In addition, the lack of an effective oversight structure and the lack of plans, goals, and milestones for the common MQ-1C contributed to noncompliance with the May 19, 2008, ADM. The FY 2010 President's budget may affect the Predator/Sky Warrior combination effort. However, the USD(AT&L) still needs to ensure compliance with Public Law 110-417, "Duncan Hunter National Defense Authorization Act for Fiscal Year 2009," section 144, October 14, 2008, as discussed in this report.

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The May 19, 2008, ADM lays out actions to combine programs of similar capability into a common acquisition program. The initial direction was to combine the Predator and Sky Warrior programs into a single program by October 2008. By not complying, the Air Force and the Army have not achieved a potential savings of \$400 million. Moreover, we estimate that the Air Force and the Army spent about \$115 million on research, development, test, and evaluation in FYs 2008 and 2009 on ineffective efforts to combine their programs. Furthermore, additional spending may not be effective without controls necessary to fulfill instructions contained in the September 13, 2007, Deputy Secretary of Defense memorandum; the May 19, 2008, ADM; and subsequent ADMs related to the combination.

## **Recommendations, Management Comments, and Our Response**

### ***Deleted, Revised, and Renumbered Recommendations***

As a result of a meeting with senior AT&L officials and the subsequent management comments, we deleted draft Recommendation 2, revised Recommendation 3, and renumbered Recommendations 3 and 4 as 2 and 3, respectively.

### ***Recommendations, Management Comments, and Our Response***

We recommend that the Under Secretary of Defense for Acquisition, Technology, and Logistics:

1. Determine whether the Predator/Sky Warrior May 19, 2008, Acquisition Decision Memorandum direction is still valid concerning combining the Predator and Sky Warrior programs and include consideration of the Reaper, the third Unmanned Aerial System in the *Predator-class*. If the combination program is still valid, establish a single acquisition program with discrete funding and do the following:

a. Validate the requirements through the Joint Capabilities Integration and Development System.

b. Develop an analysis of alternatives in accordance with DOD Instruction 5000.02, "Operation of the Defense Acquisition System," December 8, 2008, and Public Law 111-23 "Weapons Systems Acquisition Reform Act of 2009," section 139c, May 22, 2009.

c. Prepare an acquisition strategy.

d. Prepare a test and evaluation master plan.

e. Determine the optimum mix of aircraft to procure.

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***Under Secretary of Defense for Acquisition, Technology, and Logistics Comments***

The Director, Portfolio Systems Acquisition, with agreement from the Director, Acquisition Resources and Analysis, responded for the Office of the USD(AT&L) and agreed with the recommendation but proposed an alternative action. Specifically, the Director proposed an alternative recommendation that the May 19, 2008, ADM be revised to reflect the budgetary and force structure decisions made in the FY 2010 and FY 2011 President's Budget. The Director noted that the President's Budget Request did not include funding for the Air Force's procurement of Predator aircraft. In a meeting with the Director on June 21, 2010, we were provided an ADM dated June 18, 2010, which states that the Air Force is no longer required to procure MQ-1C aircraft from a common contract with the Army as directed in the May 19, 2008, ADM. During the meeting, the Director explained that the Air Force and the Army are no longer required to combine the Predator and the Sky Warrior programs.

***Our Response***

The Director's comments were partially responsive. We agree that the Air Force's decision to no longer procure the Predator reduces the need to combine the Predator and Sky Warrior programs. The revised June 18, 2010, ADM meets the intent of the recommendation as it pertains to combining the Predator and the Sky Warrior programs. However, the Director's response did not give consideration to combining the Reaper and Sky Warrior programs. Both the Sky Warrior and the Reaper were derived from the Predator and are made by the same contractor. Opportunities may exist for combining the two programs. Therefore, we request that the Director provide additional comments that address the Reaper as a potential alternative for combining the programs.

**2. Require the Air Force and Army to provide cost, schedule, and performance milestones for the development of the ground system architecture. Direct the Unmanned Aircraft System Task Force to conduct quarterly reviews and report on the progress in developing and implementing the ground system architecture.**

***Under Secretary of Defense for Acquisition, Technology, and Logistics Comments***

The Director agreed with the recommendation but proposed an alternative. The Director stated that Section 144 of Public Law 110-417 required the Secretary of Defense to establish a policy and an acquisition strategy for payloads and ground stations for manned and unmanned aerial systems and to report compliance to Congress. He noted that the report was provided to Congress as required. The Director proposed, as an alternative, that management controls be implemented that address the need to promote and initiate interoperability in the acquisition of future manned and unmanned ISR platforms, sensors, and ground stations. The Director further stated that the UAS Task

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Force had already developed interoperability profiles for line-of-sight communications and is currently developing a common architecture for future ground control stations.

### ***Our Response***

The Director's comments are partially responsive. Although we agree that management controls to promote interoperability are important, the Director's comments do not fully address the intent of the recommendation. We continue to have concerns that without specific cost, schedule, and performance milestones for the ground control station, the Office of the USD(AT&L) will not have sufficient measures to track the progress of the Air Force and the Army implementation of the ground control station. We have revised the recommendation to reflect the common ground control station guidance from the February 11, 2009, ADM. In addition, we have deleted the electro-optical sensors from the recommendation based on the congressional testimony of the Deputy Director, Unmanned Warfare Office, on March 23, 2010. Specifically, he testified that the Air Force and the Army have converged on a common electro-optical/infrared sensor payload for the Predator and the Sky Warrior. He stated that the Air Force and Army plan to use a common contract to procure the various components beginning in the third quarter of FY 2010 with the fully upgraded sensor completely fielded in FY 2014 by both Military Departments. We request that the Director provide further comments on the revised recommendation.

**3. Perform a review and initiate appropriate administrative action for the lack of compliance and the delays in implementing the direction in the September 13, 2007, Deputy Secretary of Defense memorandum and the subsequent May 19, 2008, Acquisition Decision Memorandum.**

### ***Under Secretary of Defense for Acquisition, Technology, and Logistics Comments***

The Director disagreed and stated that the budgetary decisions that impacted the implementation of the May 19, 2008, ADM were made at the Secretary and the Deputy Secretary level. As previously discussed, the USD(AT&L) issued a revised ADM that effectively rescinded the requirement for the Air Force and the Army to combine the Predator and Sky Warrior programs. However, the Director proposed, as an alternative action, a review to identify and apply lessons learned for updating acquisition documentation when programs are significantly impacted by the budgetary process.

### ***Our Response***

The alternative action that the Director proposed is responsive to the recommendation. However, we request that the Director provide a date when the alternative action will be completed.

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## Appendix A. Scope and Methodology

We conducted this performance audit from November 2008 through April 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our finding and conclusion based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our finding and conclusion based on the audit objectives.

The objective of the audit was to determine whether the Air Force and the Army complied with the May 19, 2008, ADM. To accomplish this objective, we evaluated the efforts of the Air Force and the Army in completing 16 specific action items contained in the May 19, 2008, ADM. See Appendix E.

We interviewed personnel involved in the acquisition process for the Predator and Sky Warrior programs as well as Office of the Secretary of Defense officials to determine the implementation status of the Predator and Sky Warrior combination, as directed in the May 19, 2008, ADM. We studied the roles, responsibilities, and outputs of various oversight groups participating in the Predator and Sky Warrior combination, including the ESG, OIPT, Senior Steering Group, and UAS Task Force. We also coordinated with the following offices to determine what role, if any, they played in the combination:

- USD(Comptroller)/Chief Financial Officer,
- the JROC,
- Cost Analysis Improvement Group/Cost Assessment and Program Evaluation,\*
- USD(AT&L), Acquisition Resources and Analysis, and
- U.S. Strategic Command/District Intelligence and Operations Coordination Center.

We obtained and reviewed Predator and Sky Warrior program data documenting Office of the USD(AT&L), Air Force, and Army efforts to combine the programs, incorporating information from the General Atomics February 27, 2009, proposal, and verifying coordination among the Office of the USD(AT&L), the Air Force, the Army, and other organizations listed above.

We obtained and analyzed information used to execute and report on the status of the combination. Information examined includes:

- Memoranda of Agreement and Understanding between the Air Force and the Army;
- Joint Concept of Operations for Unmanned Aircraft Systems;
- ESG briefings to the OIPT;
- OIPT meeting minutes;
- UAS Task Force briefings to the Senior Steering Group; and
- Deputy Secretary of Defense memoranda and the USD(AT&L) ADMs.

\* The functions of the Office of Program Analysis and Evaluation were transferred to the Office of the Director of Cost Assessment and Program Evaluation by Public Law 111-23, "Weapon Systems Acquisition Reform Act of 2009," May 22, 2009.

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## **Use of Computer-Processed Data**

We did not use computer-processed data to perform this audit.

## **Use of Technical Assistance**

We based our estimate of \$400 million in potential savings on information from a GAO report and the USD(AT&L). We coordinated with the DOD Office of Inspector General's Quantitative Methods and Analysis Division, the Office of the USD(Comptroller)/Chief Information Officer, and the Cost Assessment and Program Evaluation office to identify functions where potential savings could be achieved for the Predator and Sky Warrior combination. We used commercial industry standards and other factors obtained during the fieldwork to support the reasonableness of the potential savings (monetary benefits).

## **Prior Coverage**

During the last 5 years, GAO has issued two testimonies and four reports discussing the Predator and Sky Warrior combination. Unrestricted GAO reports can be accessed over the Internet at <http://www.gao.gov>.

GAO Report No. GAO-10-508T, "Defense Acquisitions – DOD Could Achieve Greater Commonality and Efficiencies among Unmanned Aircraft Systems," March 2010<sup>†</sup>

GAO Report No. GAO-09-520, "Defense Acquisitions – Opportunities Exist to Achieve Greater Commonality and Efficiencies among Unmanned Aircraft Systems," July 2009

GAO Report No. GAO-09-175, "Unmanned Aircraft Systems – Additional Actions Needed to Improve Management and Integration of DOD Efforts to Support Warfighter Needs," November 2008

GAO Report No. GAO-07-578, "Defense Acquisitions – Greater Synergies Possible for DOD's Intelligence, Surveillance, and Reconnaissance Systems," May 2007

GAO Report No. GAO-06-593, "Defense Acquisitions – Better Acquisition Strategy Needed for Successful Development of the Army's Warrior Unmanned Aircraft System," May 2006

GAO Report No. GAO-06-610T, "Unmanned Aircraft Systems – Improved Planning and Acquisition Strategies Can Help Address Operational Challenges," April 6, 2006

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<sup>†</sup>The GAO gave testimony before the Subcommittee on National Security and Foreign Affairs, Committee on Oversight and Government Reform, House of Representatives on March 23, 2010.

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## Appendix B. Laws and DOD Guidance

Various laws and forms of DOD guidance provide direction for combining and standardizing the Predator and Sky Warrior programs.

### Public Laws

Public Law 110-329, "Consolidated Security, Disaster Assistance, and Continuing Appropriations Act, 2009," section 8094c, September 30, 2008, requires that the Secretary of Defense certify to the congressional Defense committees that an inter-Service common contract for acquisition of Predator or MQ-1C aircraft would achieve cost savings, be interoperable with the current fleet, and not create undue sustainment costs compared with the current fleet.

Public Law 110-417, "Duncan Hunter National Defense Authorization Act for Fiscal Year 2009," section 144, October 14, 2008, mandates that the Secretary of Defense establish a policy and acquisition strategy for ISR payloads and sensors for unmanned aerial vehicle systems. This strategy will achieve integrated research, development, test, and evaluation and procurement commonality.

Public Law 111-23, "Weapons Systems Acquisition Reform Act of 2009," section 139c, May 22, 2009, requires an assessment of alternative plans, programs, and policies with respect to the acquisition programs of the Department of Defense.

### DOD Guidance

#### *Memoranda and Related Guidance*

A memorandum of understanding dated January 30, 2006, and signed by the Air Force and the Army Chiefs of Staff records their agreement to converge programs with complementary capabilities including the Predator and Sky Warrior programs. The memorandum documents their agreement on the need for joint unmanned intelligence collection, reconnaissance, surveillance, target acquisition/attack, and communications relay. The agreement includes the need for complementary/joint requirements for these capabilities at the tactical level and partnering to shape requirements for the Predator and Sky Warrior UAS programs with the goal of meeting the full spectrum requirements of the Joint Commander.

A memorandum from the USD(AT&L) dated November 8, 2006, states that the Predator and Sky Warrior UASs were identified as potential candidates to combine similar capabilities into a common acquisition program as a result of the Quadrennial Defense Review. The memorandum states that combining the two programs will increase capability and reduce costs for the Air Force and the Army. The USD(AT&L) memorandum requests that the Air Force and the Army provide a memorandum of agreement (within 30 days) with a plan for collaboration, including a cost-benefit analysis identifying opportunities for increased efficiency and instances where commonality fell short. The memorandum explains that the Joint Center of Excellence is working toward an overarching UAS concept of operations and requests that the Joint Staff brief the USD(AT&L) on the integrated concept of operations focusing on Predator/Sky Warrior

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capabilities. The memorandum states future opportunities for common training and basing depend on success with the joint concept of operations development.

A memorandum dated June 13, 2007, from the Deputy Secretary of Defense reiterates the recommendation to combine programs of similar capability into common acquisition efforts. The memorandum states the Air Force and the Army will pursue common acquisition programs for *Predator-class* air systems and focus on common development, procurement, sustainment, and training activities. The memorandum requests that the Air Force and the Army identify and quantify efficiencies to be gained and present their recommendations to the Deputy's Advisory Working Group in August. Additionally, the Deputy Secretary of Defense memorandum instructs the Joint Staff to develop for the Joint Commander a joint-mission study for *Predator-class* UAS capabilities—strike, ISR, and communications—that considers efficiencies and operational risks associated with each alternative.

A memorandum from the Deputy Secretary of Defense dated September 13, 2007, based on a meeting of the Deputy's Advisory Working Group states that the *Predator* and *Sky Warrior* programs will combine into a single acquisition program to achieve common development, procurement, sustainment, and training activities. The Air Force and the Army will migrate to a single contract by October 2008. Additionally, the memorandum directs that the USD(AT&L) convene a task force to coordinate specific UAS issues and opportunities. The Deputy Secretary of Defense's memorandum further instructs the Acting USD(AT&L) and the Chairman of the Joint Chiefs to develop interoperability profiles to incorporate in JCIDS, and directs the JROC to coordinate the development of UAS training activities and operational employment.

An October 5, 2007, memorandum from the Acting USD(AT&L) directs the formation of the UAS Task Force. The memorandum states that this task force will lead a Department-wide effort to coordinate critical UAS issues and enhance operations, interdependencies, and acquisition streamlining. The memorandum asks the Secretaries of the Military Departments, Under Secretary of Defense for Intelligence, Vice Chairman of the Joint Chiefs, Commander of U.S. Joint Forces Command, Assistant Secretary of Defense (Networks and Information Integration)/DOD Chief Information Officer, and Director of Program Analysis and Evaluation to support the UAS Task Force's joint integrated product teams.

On December 10, 2007, DOD issued its integrated "UAS Systems Roadmap (2007-2032)," summarizing five major studies underway to advance unmanned systems development across DOD. The systems roadmap defines and explains interoperability: "Interoperability is the ability to operate in synergy in the execution of assigned tasks . . . interoperability is achieved by buying common components, systems, and software and/or by building systems to common standards."

On February 8, 2008, the Air Force and the Army Program Management Offices signed a memorandum of agreement to leverage commonality in the development and acquisition of a common MQ-1C aircraft UAS to reduce total acquisition costs and facilitate interoperability. The memorandum states that an MQ-1C Joint Services Configuration Management Plan will be created. The memorandum assigns responsibility to the Joint Program Management Working Group to support the establishment of the Joint Configuration Control Board.

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On April 9, 2008, the JROC directed the Air Force and Strategic Command to lead an integrated Service/combatant command effort to define a force-sizing construct for airborne ISR. The initial effort was to focus on supporting general-purpose maneuver elements sustaining existing operational plans and return within 60 days with an initial draft of the candidate sizing constructs.

The May 19, 2008, ADM emphasizes direction from the September 13, 2007, Deputy Secretary of Defense memorandum to combine the Predator and Sky Warrior programs "into a single acquisition program, to include a common data link, in order to achieve common development, procurement, sustainment and training activities."

On October 28, 2008, the USD(AT&L) directed the Air Force to participate in a joint effort to develop a prototype of a common ground station interface and develop competitive solutions for procurement of future ground stations for *Predator-class* unmanned aircraft.

A January 16, 2009, memorandum signed by the Deputy Under Secretary of Defense (Acquisition and Technology) and the Deputy Under Secretary of Defense (Portfolio, Programs and Resources) directs "the Army and the Air Force to collaborate in the accomplishment of a single comprehensive business case analysis to assess the cost, schedule, performance, and operational impacts of migrating to a single acquisition program by March 2, 2009," and "to make an informed, fact-based decision on where to continue to invest funding to develop and procure low-band Signals Intelligence sensor capability." The memorandum provides specific guidance for the business case analysis.

The USD(AT&L) issued an ADM on February 11, 2009, that directs the Air Force and the Army to adopt a common ground control station architecture and submit an initial plan within 45 days. The plan is to include a definition of a common functional architecture and interface standards. Additionally, the USD(AT&L) directed the Air Force and the Army to accelerate the fielding of a common data link-compliant communication system on Predators, Sky Warriors, Reapers, and other Army UASs.

On March 2, 2009, the Deputy Under Secretary of Defense (Acquisition and Technology) directed the Air Force and the Army to provide cost estimates for their individual MQ-1Cs.

The August 13, 2009, ADM instructs the Army and the Air Force to develop and field a highly common EO/IR sensor payload configuration for the *Predator-class* UASs and to include cost and schedule documentation.

The Quadrennial Defense Review Report issued in February 2010 emphasized the DOD commitment to unmanned aircraft systems. The report recognized that the Predator, Reaper and other systems, have proven invaluable to the warfighter. According to the report DOD made a commitment to grow the capacity of the Predator/Reaper in FY 2011 through 2015. In addition, the Army will accelerate production of the Sky Warrior.

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### **DOD Directive and Instructions**

DOD Directive 5000.01, "Defense Acquisition System," November 20, 2007, provides management principles and mandatory policies for managing all acquisition programs. The primary objective of defense acquisition is to acquire quality products that satisfy user needs with measurable improvements to mission capability and operational support, in a timely manner, and at a fair and reasonable price.

DOD Instruction 5000.02, "Operation of the Defense Acquisition System," December 8, 2008, states that the Defense Acquisition Board must advise the USD(AT&L) on critical acquisition decisions and document the decision(s) resulting from the review in an ADM. Further, DOD Components cannot terminate or substantially reduce participation in joint ACAT ID programs without Requirements Authority Review and USD(AT&L) approval. The USD(AT&L) may require a DOD Component to continue some or all funding to sustain the joint program in an efficient manner, despite approving the Component's request to terminate or reduce participation. The Instruction also shows an analysis of alternatives is statutorily required in major defense acquisition programs throughout the acquisition life cycle.

DOD Instruction 4120.24-M, "Defense Standardization Program," March 2000, explains that information superiority demands standardized data and equipment interfaces and performance requirements to permit information to be shared among systems and personnel.

Chairman of the Joint Chiefs of Staff Instruction 3170.01F, "Joint Capabilities Integration and Development System," May 1, 2007, identifies the JCIDS process as a key supporting process for DOD acquisitions. The JCIDS identifies joint military capability needs and can be tailored.

### **Code of Federal Regulations**

Authorities and relationships, 32 CFR sec. 382.5 (2002) states the USD(AT&L)'s decisions must be reflected in an ADM issued by the USD(AT&L) for implementation by the Heads of DOD Components. The authority of the USD(AT&L) under this paragraph may not be delegated by the USD(AT&L).

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## Appendix C. September 13, 2007, Deputy Secretary of Defense Memorandum



THE DEPUTY SECRETARY OF DEFENSE  
WASHINGTON

September 13, 2007

MEMORANDUM FOR SECRETARIES OF THE MILITARY DEPARTMENTS  
CHAIRMAN OF THE JOINT CHIEFS OF STAFF  
UNDER SECRETARIES OF DEFENSE  
COMMANDERS OF THE COMBATANT COMMANDS  
ASSISTANT SECRETARIES OF DEFENSE  
GENERAL COUNSEL OF THE DEPARTMENT OF DEFENSE  
DIRECTOR, ADMINISTRATION AND MANAGEMENT  
DIRECTOR, PROGRAM ANALYSIS AND EVALUATION

SUBJECT: Unmanned Aircraft Systems (UAS)

Pursuant to the discussions and agreement at the September 13, 2007, Deputy's Advisory Working Group, the following actions are hereby directed in lieu of establishing an executive agent for UAS:

- The Acting USD(AT&L) will convene a task force to coordinate critical UAS issues and to develop a way ahead that will enhance operations, enable interdependencies, and streamline acquisition of UAS. The task force will report regularly to the DAWG on findings and recommendations.
- The task force will identify to the DAWG and, where appropriate, assign lead organizations for issues related to acquisition and management of UAS, including interoperability, civil airspace integration, frequency spectrum and bandwidth utilization, and airframe payload and sensor management.
- The Joint Requirements Oversight Council will coordinate the development of UAS training activities and operational employment.
- The Predator and Sky Warrior programs will be combined into a single acquisition program, to include a common data link, in order to achieve common development, procurement, sustainment, and training activities. The Department will migrate to a single contract by October 2008.
- The Acting USD(AT&L), in coordination with the Chairman of the Joint Chiefs of Staff, will develop interoperability profiles for incorporation into the Joint Capabilities Integration Development System.
- The Acting USD(AT&L) will evaluate and make recommendations leading to increased competition for UAS acquisition.

These actions will provide for common, joint, and operationally effective UAS programs.



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## Appendix D. May 19, 2008, Acquisition Decision Memorandum



ACQUISITION,  
TECHNOLOGY  
AND LOGISTICS

THE UNDER SECRETARY OF DEFENSE  
3010 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3010

MAY 19 2008

MEMORANDUM FOR SECRETARY OF THE AIR FORCE  
SECRETARY OF THE ARMY

SUBJECT: Predator/Sky Warrior Acquisition Decision Memorandum (ADM)

On May 2, 2008, I conducted a Defense Acquisition Executive (DAE) Review of the Air Force Predator and Army Sky Warrior programs. The two Military Departments have made some progress toward meeting the intent of the September 13, 2007, DepSecDef direction to combine the Predator and Sky Warrior programs into a single acquisition program and migrate to a single contract. However, that progress has not been fast enough, and there is significantly more work to be done to complete the task as directed. I cannot emphasize enough the direction from the Deputy Secretary to combine these programs "into a single acquisition program, to include a common data link, in order to achieve common development, procurement, sustainment, and training activities."

I acknowledge the work of the Program Executive Officer-led, Air Force/Army MQ-1C Executive Steering Group (ESG) pursuant to the February 2008 Memorandum of Agreement. I am encouraged with the initial results of the ESG toward commonality and interoperability; however, the delivery of this capability comes through delivery of the common MQ-1C aircraft, which is moving too slowly. I direct the ESG to establish an MQ-1C Integrated Test Team and within 90 days submit a common Test and Evaluation Master Plan (TEMP). The TEMP shall encompass Developmental and Operational Testing and include a plan for an integrated Operational Utility Evaluation to coincide with the current Army Limited User Test scheduled for April 2009. The ESG shall also ensure the Military Departments complete an update to their acquisition strategies prior to Milestone C.

The Air Force will transition to a common MQ-1C airframe as soon as possible, but not later than January 2009, and both the Army and Air Force will use a common airframe contract as soon as possible to achieve quantity efficiencies. Prior to award, production contracts in excess of \$20M for Predator and Sky Warrior shall be provided to me for review until further notice. Fiscal Year 2009 budget and supplemental funds may only be used to purchase common MQ-1C airframes unless a waiver is granted in writing by me.

I am also not satisfied with the progress on common electro-optical/infrared (EO/IR) sensor ball and data-link components for Predator and Sky Warrior. I direct the ESG accelerate efforts to resolve current hardware differences for those systems and return in 90 days with a joint plan that achieves fully common components for these subsystems. Provide cost and schedule impacts to Predator, Sky Warrior, and Armed Reconnaissance Helicopter

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## Appendix D. May 19, 2008, Acquisition Decision Memorandum (Cont'd)

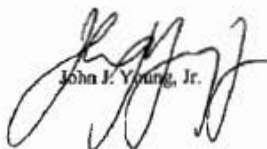
associated with meeting this goal. A USD(AT&L) waiver through the ESG will be required for any non-common aircraft hardware. I also direct the ESG, in coordination with the OSD Unmanned Aircraft Systems Task Force, to develop a common Ground Segment interface standard that supports all system functions required between the Ground Segment and the aircraft and payloads.

In accordance with the Department's urgent need for Intelligence, Surveillance, and Reconnaissance (ISR) capability, the FY 2008 Global War on Terrorism (GWOT) procurement for Air Force Unmanned Aircraft Systems should include a mix of MQ-1s and MQ-9s. For FY 2008 GWOT, I direct the Air Force to plan to procure the optimum mix of MQ-1s and MQ-9s within existing manufacturing capability and to report this plan to the ESG for approval. For the FY 2009 President's Budget and GWOT supplemental, I direct the Army and Air Force to procure from a single contract the maximum number of common MQ-1C aircraft achievable, considering risk factors, production ramp-up timelines, and force structure mix. I will approve that number, with the supporting rationale, prior to the beginning of FY 2009.

The ESG will provide progress updates toward MQ-1C commonality via periodic Defense Acquisition Executive Reviews. I direct the Air Force Predator and Army Sky Warrior programs return in January 2009 to address the Air Force MQ-1C production transition decision, continued progress on common MQ-1 components, sufficiency of production capacity, with associated lifecycle cost and schedule impacts, and future management structure. Ensure your presentation includes an update on your efforts to achieve maximum commonality for the data links, the EO/IR sensor ball, the signal intelligence sensor, Ground Segment interface, and your efforts to conform to Unmanned System Interoperability Profile version one, and a technology readiness assessment appropriate at this stage of the integrated ACAT ID program. I designate both the Air Force Predator and the Army Sky Warrior as Acquisition Category (ACAT) ID programs. The ESG shall continue to develop options and schedules to support the combination of both programs into a single ACAT ID program.

I will review the results of the Joint Requirements Oversight Council ISR force mix results and adjust this direction if necessary.

My point of contact is Ms. Mona Lush, Deputy Director, Acquisition Resources & Analysis (OUSD(AT&L)), at 703-697-1660.

  
John F. Young, Jr.

cc:  
DAB Members  
DAB Advisors

2

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26



## Appendix E. Status of Air Force and Army Compliance With the Acquisition Decision Memorandum

Action Items (Addressed to both Services unless specified in parentheses)	Compliance (Audit Determined)	Air Force and Army Status of Action Items	Air Force and Army Comments as of September 8, 2009
1. Establish an MQ-1C Integrated Test Team.	Yes	Closed	None
2. Submit Common Test and Evaluation Master Plan.	No	Request to Close	The Army Test and Evaluation Master Plan was updated, and the Army expects to forward it to Office of the USD(AT&L) for coordination in September 2009.*
3. Complete update to acquisition strategies prior to Milestone C.	No	Open	The Army's Acquisition Strategy was briefed at the January 2009 Defense Acquisition Executive Review.
4. Transition to a common MQ-1C Airframe (Air Force).	No	Open	The Air Force is seeking USD(AT&L) relief from requirement to procure five MQ-1Cs. This action item was superseded with the Air Force decision to procure an all Reaper fleet and zero out funding for the Predator in FY 2010.
5. Utilize common airframe contract.	No	Open	FY 2009 Appropriation Act requires the USD(AT&L) to certify cost savings before contract instituted. The Air Force and the Army are waiting for congressional response. As explained in Item 4 the Air Force funding decisions superseded this item.
6. Submit production contracts in excess of \$20 million for review by the USD(AT&L).	Yes	Request to Close	The August 13, 2009, ADM rescinds the action item.
7. Use FY 2009 funds only to purchase common MQ-1C airframes unless granted a waiver by the USD(AT&L).	Yes	Closed	None

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8. Resolve current hardware differences for the EO/IR sensor ball and return in 90 days with a joint plan. Provide cost and schedule impacts.	No	Request to Close	The August 13, 2009 ADM supersedes the May 19, 2008 ADM. The Air Force and the Army have agreed on a highly common EO/IR sensor ball.*
9. Resolve current hardware differences for the data link and return in 90 days with a joint plan.	No	Request to Close	The Air Force and the Army briefed the OIPT on March 25, 2009, and September 8, 2009.*
10. Provide cost and schedule impacts to achieve fully common components for the data link.	No	Open	Not Addressed.*
11. Submit a waiver to the USD(AT&L) for any noncommon aircraft hardware.	No	Open	Not Addressed.
12. Develop a common ground segment interface standard.	No	Request to Close	The February 2009 UAS Ground Control Station ADM supersedes the May 19, 2008, ADM.*
13. Plan to procure the optimum mix of Predator and Reaper within existing manufacturing capability for FY 2008 (Air Force).	No	Open	Not Addressed.
14. Procure from a single contract the maximum number of common MQ-IC aircraft achievable.	No	Open	Not Addressed.
15. Return in January 2009 to address the Air Force MQ-IC production transition decision, common components, production capacity, and future management	No	Open	Not Addressed.
16. Present ESG options for single Acquisition Category ID program.	No	Request to Close	Briefed March 25, 2009. The Air Force and the Army will continue to work commonality issues through the ESG.*

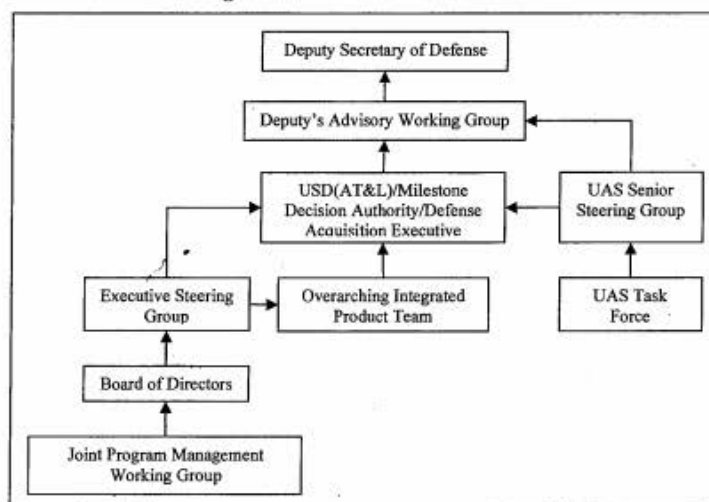
\*The Air Force and the Army stated that these action items were closed in the October 13, 2009, OIPT report.

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## Appendix F. Oversight Structure for Combining Predator and Sky Warrior Programs

Several groups participate in implementing the Predator and Sky Warrior combination. The figure below depicts the oversight structure for the combination.

Oversight Structure for the Combination\*



\*We were unable to obtain a complete and accurate organizational chart, including responsibilities, protocols, and lines of authority for the combination. This is the DOD Office of Inspector General's understanding and interpretation of the combination's organizational structure based on information provided by the USD(AT&L), the Air Force, and the Army.

### Joint Program Management Working Group

The Joint Program Management Working Group is cochaired by the Program Managers for the Predator and Sky Warrior. The Joint Program Management Working Group is responsible for providing collaborative program management in identifying and moving toward greater commonality and interoperability of the two programs where practical. The Joint Program Management Working Group coordinates weekly to achieve the intent of the May 19, 2008, ADM. The cochairs are responsible for directing activities and developing plans of action along with goals to achieve joint efficiencies.

### Board of Directors

The Board of Directors is cochaired by the Air Force Program Director of the 658<sup>th</sup> Aeronautical Systems Squadron and the Army Program Manager for UASs. They are responsible for providing guidance and assessing progress of the MQ-1C program. The Board of Directors also

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coordinates and settles issues that have not been resolved by the Joint Program Management Working Group.

#### **Executive Steering Group**

The ESG is cochaired by the Air Force and the Army Program Executive Officers for Aviation and Aircraft. According to the February 8, 2008, memorandum of agreement, the purpose of the ESG is to provide overarching executive management of the Air Force and the Army combined MQ-IC acquisition effort. The memorandum states the ESG also assesses progress toward stated goals and settles issues that have not been resolved by the Board of Directors. The Air Force cochair of the ESG and an Army ESG official stated that the ESG measures the progress of the action items in the May 19, 2008, ADM using a "scorecard" listing the action items and whether or not they are considered open or closed. This scorecard is presented to the USD(AT&L) or Office of the USD(AT&L) representatives to elicit a decision. If the USD(AT&L) closes an action item, he indicates he is satisfied with the Air Force and the Army efforts.

#### **Overarching Integrated Product Team**

The OIPT is a DOD Instruction 5000.02 requirement for all Acquisition Category I acquisition programs. According to the Instruction, the primary role of the OIPT is to facilitate program communications and issue resolution and to support the USD(AT&L). The OIPT Chairman stated that the OIPT is convened as needed on a program-by-program basis and is made up of subject matter experts from the Office of the Secretary of Defense and the Joint Staff, and representatives of the appropriate program office. The Chairman added that, regarding the Predator and Sky Warrior combination, the OIPT's responsibility is to review program plans for execution of the combination and advise the USD(AT&L). The ESG periodically briefs the OIPT on the progress of the combination effort, and the OIPT subsequently issues meeting minutes and recommendations to the USD(AT&L). The OIPT does not verify the accuracy or reliability of the information presented to it by the ESG. The Assistant to the Deputy Director for Unmanned Warfare explained there is no OIPT specifically designated for the combination, and the OIPT weighs in on ESG recommendations but does not have decisionmaking authority. Despite this, the Air Force and the Army stated the OIPT closed the action items in the May 19, 2008, ADM.

#### **Unmanned Aircraft System Task Force**

The UAS Task Force was formed in October 2007 by the acting USD(AT&L) as a result of direction from the Deputy Secretary of Defense. The purpose of the task force is to lead a Department-wide effort to coordinate critical UAS issues and to develop a way ahead for UASs that will enhance operations, enable interdependencies, and streamline acquisition. With that mandate, the UAS Task Force has responsibilities beyond the Sky Warrior and Predator combination. Similar to the OIPT, the UAS Task Force has no decisionmaking authority and cannot dictate what the Services can or cannot do. According to GAO Report Number 09-175, a primary near-term focus of the UAS Task Force has been to implement the direction to combine the Predator and Sky Warrior programs into a single program. However, the Assistant to the Deputy Director for Unmanned Warfare, a member of the UAS Task Force, stated the Predator and Sky Warrior combination has essentially been pushed out of the task force, and most of the oversight is being done by the OIPT and the Defense Acquisition Board. The task force official added that initially there were three sub-integrated product teams directly dedicated to the

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Predator and Sky Warrior combination. The dedicated sub-IPTs were Acquisition and Streamlining, Standardization and Interoperability, and Payload and Sensor. The Acquisition and Streamlining IPT was consolidated into the core task force. The Standardization and Interoperability IPT does not have responsibilities related to the combination. Additionally, the Standardization and Interoperability IPT did not deliver interoperability profiles for the Predator and Sky Warrior combination. The Payload and Sensor IPT is pursuing commonality for signal intelligence. Overall, the IPT roles regarding the combination effort have been eliminated or significantly reduced. The draft UAS Task Force charter does not specify responsibilities pertaining to the Predator and Sky Warrior combination.

### **Senior Steering Group**

Similar to the UAS Task Force, the Senior Steering Group was formed in October 2007 by the acting USD(AT&L) at the direction of the Deputy Secretary of Defense. Its members come from the Services, the Joint Staff, the Office of Cost Assessment and Program Evaluation, the Office of the Assistant Secretary of Defense (Networks and Information Integration)/DoD Chief Information Officer, and the Joint Forces Command. The Senior Steering Group is responsible for coordinating significant issues with the UAS Task Force before presenting them to the Deputy's Advisory Working Group. The Senior Steering Group also issues UAS Task Force meeting minutes to the USD(AT&L).

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Office of the Under Secretary of Defense for Acquisition,  
Technology, and Logistics Comments



OFFICE OF THE UNDER SECRETARY OF DEFENSE  
3000 DEFENSE PENTAGON  
WASHINGTON, DC 20301-3000

ACQUISITION,  
TECHNOLOGY  
AND LOGISTICS

JUN 30 2010

MEMORANDUM FOR ASSISTANT INSPECTOR GENERAL FOR ACQUISITION  
AND CONTRACT MANAGEMENT, DoDIG

THROUGH: DIRECTOR, ACQUISITION RESOURCES AND ANALYSIS - *WJ 7/1/10*

SUBJECT: Response to DoDIG Draft Report on Implementation of the Predator/Sky  
Warrior Acquisition Decision Memorandum dated May 19, 2008 (Project  
No. D2009-D000CD-0071.000)

As requested, I am providing responses to the general content and  
recommendations contained in the subject report.

**Recommendation 1:** Determine whether the Predator/Sky Warrior May 19, 2008,  
Acquisition Decision Memorandum (ADM) direction is still valid concerning combining  
the Predator and Sky Warrior programs and include consideration of the Reaper, the third  
Unmanned Aircraft System (UAS) in the Predator-class. If the combination program is  
still valid establish a single acquisition program with discrete funding and do the  
following:

- a. Validate the requirements through the Joint Capabilities Integration and  
Development System.
- b. Develop an analysis of alternatives in accordance with DoD Instruction  
5000.02, "Operation of the Defense Acquisition System," December 8, 2008, and Public  
Law 111-23 "Weapons Systems Acquisition Reform Act of 2009," section 139c, May 22,  
2009.
- c. Prepare an acquisition strategy.
- d. Prepare a test and evaluation master plan.
- e. Determine the optimum mix of aircraft to procure.

**Response:** Concur. We recommend rewording the recommendation to: "Revise  
direction given in the May 19, 2008, Predator/Extended Range Multi Purpose (ERMP)  
Unmanned Aircraft System (UAS) Acquisition Decision Memorandum (ADM) to reflect  
budgetary and force structure decisions made in the FY10 and FY11 President's Budget."  
This office recognizes that acquisition management decisions are made in support of the  
Department's decisions regarding capability requirements and resource allocation. As  
such, on June 18, 2010, the USD(AT&L) issued a revised ADM that reflects the  
budgetary decisions made on the ERMP and Predator programs. Specifically, the  
decision was made in the President's Budget Request for FY10-15 to zero Air Force  
Procurement of Predator aircraft. This was documented in POM-10 Program Decision

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Memorandum III, signed by the Deputy Secretary of Defense on October 31, 2008. A key highlight of the FY10 President's Budget, as stated by the Secretary in his budget briefing, was the significant ramp-up of Intelligence, Surveillance, and Reconnaissance (ISR) capabilities to include 50 orbits of combined Predator/Reaper aircraft fielded by FY10. This ramp-up was achieved by zeroing procurement of Predator and maximizing procurement of Reaper aircraft through the FYDP.

**Recommendation 2:** Establish cost, schedule, and performance milestones for the Predator-Class Unmanned Aircraft Systems to develop and field a standard data link or grant a waiver and certify that a standard data link is technologically infeasible or uneconomical as required by Public Law 109-163, "National Defense Authorization Act for Fiscal Year 2006," subtitle E - Joint and Multiservice Matters, section 141, January 6, 2006.

**Response:** Non-Concur. The report correctly states that the data link for Predator and ERMP already contain common components (about 40 percent). However, the Overarching Integrated Product Team closed the action because the Air Force estimated that it would require an additional \$35 million to complete a fully common data link. Since the Air Force no longer plans to buy the Predator, no further work is needed on a common data link. Both the Predator and ERMP programs are still compliant with Public Law 109-163, "National Defense Authorization Act for Fiscal Year 2006," subtitle E - Joint and Multiservice Matters, section 141. The law requires "all tactical unmanned aerial vehicles (UAVs) of the Army, Navy, Marine Corps, and Air Force are equipped and configured so that—(1) the data link used by those vehicles is the Department of Defense standard tactical unmanned aerial vehicle data link known as the Tactical Common Data Link (TCDL), until such time as the Tactical Common Data Link standard is replaced by an updated standard for use by those vehicles." The law specifies a standard, known as "Tactical Common Data Link" which is a subset of the Common Data Link Specification and applies to all tactical UAS. To comply with the law the Army ERMP program is developing and procuring aircraft with a TCDL-compliant data link on both the Quick Reaction Capability configured systems and production configured systems. The Air Force Predator program began in 1994 and pre-dates the legislation. The Air Force is in the process of transitioning Predator to the TCDL-compliant Predator Primary Data Link to complete in 2012 as reflected in their FY11 budget documents. Recommend deleting this recommendation.

**Recommendation 3:** Institute management controls that include establishing cost, schedule, and performance milestones to comply with Public Law 110-417, "Duncan Hunter National Defense Authorization Act for Fiscal Year 2009," section 144, October 14, 2008, requiring an acquisition strategy for intelligence, surveillance, and reconnaissance conducted for manned and unmanned systems; procurement of common electro-optical sensors, ground system architecture; and standardization for interoperability.

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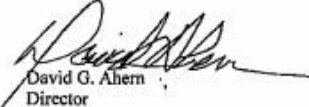
Revised and  
renumbered as  
Recommendation 2

**Response:** Concur. Section 144 of Public Law 110-417 required the Secretary of Defense to "establish a policy and acquisition strategy for intelligence, surveillance, and reconnaissance payloads and ground stations for manned and unmanned aerial vehicle systems" and to report compliance to Congress. The report provided to Congress described the policy and acquisition strategy for commonality among control stations and payloads for manned and unmanned ISR aircraft systems. We propose an alternative recommendation: "Institute management controls that address the need to implement open interfaces and standards-based architectures to promote interoperability in the acquisition of future manned and unmanned intelligence, surveillance, and reconnaissance (ISR) platforms, sensors, and ground stations." Enhanced interoperability between ISR systems, sensors, and ground infrastructure is a key enabling capability as the Department continues to expand ISR support for ongoing conflicts. Key to interoperability, however, is the definition and implementation of open architectures with open, standards-based interfaces. In this light, the UAS Task Force has developed interoperability profiles for line-of-sight communications and is in the process of developing a common architecture for future ground control stations. These interfaces will be included as future requirements for the acquisition of ISR systems.

**Recommendation 4:** Perform a review and initiate appropriate administrative action for the lack of compliance and the delays in implementing the direction in the September 13, 2007, Deputy Secretary of Defense memorandum and the subsequent May 19, 2008, Acquisition Decision Memorandum.

**Response:** Non-Concur. As discussed in our response to recommendation 1, the budgetary decisions that impacted the May 2008 ADM are made at the Secretary and Deputy Secretary level and include the appropriate under secretaries, including the USD(AT&L), along with representatives from the Military Departments. As an alternative action to determining the lack of compliance with the ADM, we propose to "Perform a review and identify lessons learned that can be applied to the process of developing and revising acquisition documentation when programs are significantly impacted by decisions made in the Planning Programming and Budget Execution (PPBE) process." This office recognizes that acquisition management decisions are made in support of the Department's decisions regarding capability requirements and resource allocation.

Please contact [REDACTED] OUSD(AT&L)/A/PSA-UW, [REDACTED] if additional information is required.

  
David G. Ahern  
Director  
Portfolio Systems Acquisition



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Inspector General  
Department of Defense

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