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August 4, 2006

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# Acquisition

Allegations Concerning  
Mismanagement of the Aerial  
Targets Program (D-2006-106)

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Department of Defense  
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### **Acronyms**

CTEIP	Central Test and Evaluation Investment Program
GRDCS	Gulf Range Drone Control System
MSTCS	Multi-Service Target Control System



INSPECTOR GENERAL  
DEPARTMENT OF DEFENSE  
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ARLINGTON, VIRGINIA 22202-4704

August 4, 2006

MEMORANDUM FOR ASSISTANT SECRETARY OF THE AIR FORCE  
(FINANCIAL MANAGEMENT AND COMPTROLLER)

SUBJECT: Report on Allegations Concerning Mismanagement of the Aerial  
Targets Program (Report No. D-2006-106)

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

DoD Directive 7650.3 requires that all recommendations be resolved promptly. The Air Force comments were nonresponsive for Recommendation A. and partially responsive for Recommendation B. Based on management comments, we revised Recommendation B.2. Therefore, we request that the Air Force comment on the final report by September 5, 2006.

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

We appreciate the courtesies extended to the staff. Questions should be directed to Dianna J. Pearson at (703) 604-9063 (DSN 664-9063) or Thomas J. Hilliard at (703) 604-9062 (DSN 664-9062). See Appendix D for the report distribution. Audit team members are listed inside the back cover.

By direction of the Deputy Inspector General for Auditing:

A handwritten signature in black ink that reads "Richard B. Jolliffe".

Richard B. Jolliffe  
Assistant Inspector General  
Acquisition and Contract Management

## Department of Defense Office of Inspector General

Report No. D-2006-106

August 4, 2006

(Project No. D2005-D000AB-0199.000)

### Allegations Concerning Mismanagement of the Aerial Targets Program

#### Executive Summary

**Who Should Read This Report and Why?** Air Force acquisition and flight test officials affiliated with the Gulf Range Drone Control System Program and the DoD test flight community should read this report. The report addresses allegations to the Defense Hotline concerning mismanagement of the Aerial Targets Program.

**Background.** We performed the audit in response to allegations concerning waste and mismanagement by the Air Force Aerial Targets Systems Program Office. The Hotline allegations were submitted in three letters by an anonymous complainant and addressed concerns about the lack of participation and support by the Air Force Aerial Targets Systems Program Office for the Multi-Service Target Control System Program. Appendix B shows the six primary areas of concern that were identified in the three letters and Appendix C shows the audit response to those concerns.

The Air Force Aerial Targets Systems Program Office provides realistic aircraft scenarios using targets and analyzing the targets' control, launch, and recovery. To track targets, the Air Force Aerial Targets Systems Program Office uses the Gulf Range Drone Control System, which has been in operation since the mid-1980s, to launch and control drones over the Gulf of Mexico test range. The Gulf Range Drone Control System evaluates the effectiveness of a total weapon system against aerial targets representing threats. The Air Force Aerial Targets Systems Program Office uses the Gulf Range Drone Control System with full-scale and subscale aerial targets. The QF-4 Full-scale Aerial Target, which is a drone converted from an F-4 aircraft, is a legacy system that the Air Force Aerial Targets Systems Program Office plans to replace. The Air Force Subscale Aerial Target is in development and will replace legacy subscale targets.

The Multi-Service Target Control System Program Office is developing the Multi-Service Target Control System, which might replace the target control segment of the Gulf Range Drone Control System. The Multi-Service Target Control System provides single and multiple target capability within local or over-the-horizon target areas, using new or modified control consoles that may be fixed, mobile, and transportable. The Multi-Service Target Control System would correct existing shortfalls in over-the-horizon operations, data encryption, datalink frequency, and accuracy for Army, Navy, and Air Force target control systems.

The Joint Tactical Radio System is a DoD Program that will coordinate and integrate military communications and move away from using single function legacy systems to using systems that are interoperable across Joint operations. The Air Force Subscale Aerial Target and the Multi-Service Target Control System potentially duplicate communication functions of the Joint Tactical Radio System. In 1998, the Assistant

Secretary of Defense for Networks and Information Integration, formerly the Assistant Secretary of Defense, Command, Control, Communications, and Intelligence, instituted a moratorium and issued policy that required the Services to stop developing and acquiring radio systems that were not part of the Joint Tactical Radio System infrastructure. The policy required new radio systems and improvements to existing systems be reviewed to assess duplication.

**Results.** We substantiated two of six areas of concern in the allegation letters. We did not substantiate the other four areas of concern. (See Appendix B for details on the six areas of concern and Appendix C for the audit response on the areas.) We substantiated the allegation that the Air Force Aerial Targets Systems Program Office experienced interference while testing targets using the Gulf Range Drone Control System. As a result, the Air Force Aerial Targets Systems Program Office could be vulnerable to interference until the system is replaced. We recommend that the Air Combat Command mitigate the risk of using the frequency for aerial targets testing and accelerate milestones for the replacement system. (See finding A for the detailed recommendations.)

We also substantiated that the Air Force Acquisition Executive had not reported new systems, including the Air Force Subscale Aerial Target and the Multi-Service Target Control System Program, to the Assistant Secretary of Defense for Networks and Information Integration for the Joint Tactical Radio System. As a result, the Assistant Secretary will not have an accurate inventory of Joint Tactical Radio System-related systems within DoD. We recommend that the Air Force Acquisition Executive report the systems as required. (See finding B for the detailed recommendations.)

**Management Comments and Audit Response.** The Air Force nonconcurrent with Recommendation A. to move the Gulf Range Drone Control System to a more secure frequency and provided conflicting accounts about the type of frequency used. Therefore, we revised Finding A and the associated recommendations to focus on the primary concern that the Air Force experienced interference during aerial targets testing because of the frequency it uses with the Gulf Range Drone Control System. We recommend that the Air Force mitigate the risks of using the frequency and accelerate the implementation schedule for the replacement system for the Gulf Range Drone Control System. The Air Force partially concurred with Recommendation B. and will report the Air Force Subscale Aerial Target to the Joint Tactical Radio System Program; however, the Air Force will not report Multi-Service Target Control System Program because it believes that Army is the lead for the program. We confirmed that the program office is still within the Air Force, and therefore the Air Force must report it. As a result of management comments, we revised Recommendation B.2. to require the Air Force to follow up on the guidance for reporting requirements during the suspension period. A discussion of the management comments is in the Finding section of the report and the complete text is in the Management Comments section. Therefore, we request that the Air Force comment on the final report by September 5, 2006.

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## Background

We performed the audit in response to allegations to the Defense Hotline concerning mismanagement of the Aerial Targets Program. The allegations were submitted by an anonymous complainant in three letters about the Air Force Aerial Targets Systems Program Office lack of participation and support for the Multi-Service Target Control System (MSTCS) Program. Appendix B identifies the six primary areas of concern that were identified in the three letters and Appendix C is the audit response to the areas of concern.

**The Air Force Aerial Targets Systems Program Office.** The Air Force Aerial Targets Systems Program Office provides realistic aircraft scenarios using targets and analyzing the targets' control, launch, and recovery. To track targets, the Air Force Aerial Targets Systems Program Office uses the Gulf Range Drone Control System (GRDCS), which has been in operation since the mid-1980s, to launch and control drones over the Gulf of Mexico test range. The GRDCS evaluates the effectiveness of a total weapon system against aerial targets representing threats. Although the GRDCS controls targets from remote locations, it is not merely a target control system; it is also a test range instrumentation system that observes, measures, and controls the three main capabilities: target control, missile tracking, and shooter tracking. Also, the GRDCS is able to track and control four drones, track four shooter aircraft using the GRDCS shooter pods, and terminate four missiles. The GRDCS uses a multilateration<sup>1</sup> technique to track airborne tests. The Air Force is considering the use of the Global Positioning System for tracking targets in the future. The Air Force Aerial Targets Systems Program Office uses GRDCS with full-scale and subscale aerial targets. The QF-4 Full-scale Aerial Target (QF-4 target), which is converted from the F-4 aircraft, is a legacy system that the Air Force Aerial Targets Systems Program Office sees a need to replace. The Air Force Subscale Aerial Target is a more recent development and will replace legacy subscale targets.

**The MSTCS Program.** The MSTCS Program, which is an Air Force lead program, might replace the target control segment of the GRDCS. The MSTCS provides single and multiple target capability within local or over-the-horizon target areas, using new or modified control consoles that may be fixed, mobile, and transportable. The MSTCS would correct existing shortfalls in over-the-horizon operations, data encryption, datalink frequency, and accuracy for Army, Navy, and Air Force target control systems. The MSTCS Program receives Central Test and Evaluation Investment Program (CTEIP) funding for MSTCS because the system will operate in a Joint environment. Public Law No. 101-511, the Department of Defense Appropriations Act, November 5, 1990, established funding for performance and joint developmental testing and evaluation. The language in Senate Report No. 101-521, 101st Cong. 2nd Session (1991), referred to the program as the Central Test and Evaluation Investment Program and sought to improve the coordination and planning for investments in test and evaluation facilities. The approach allows the CTEIP to focus on the highest priority Joint test requirements and capabilities and eliminate unwarranted duplication of effort.

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<sup>1</sup> Multilateration is a method of tracking an object by measuring its distance from at least three known locations. The GRDCS uses ground stations and airborne platforms to measure these distances for tests flown over the Gulf of Mexico.

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To be included in the CTEIP, a project must be multi-Service, developmental, and not be used to procure the developed test asset or capability.

**Joint Tactical Radio System.** The Joint Tactical Radio System is a DoD program that will coordinate and integrate military communications and move from using single function legacy systems to using systems that are interoperable across Joint operations. Components of the Air Force Subscale Aerial Target and the MSTCS potentially duplicate functions of the Joint Tactical Radio System. In August 1998, the Assistant Secretary of Defense for Networks and Information Integration, formerly the Assistant Secretary of Defense, Command, Control, Communications, and Intelligence, instituted a moratorium and issued policy that required the Services to stop developing and acquiring radio systems that are not part of the Joint Tactical Radio System infrastructure. The policy required new radio systems and improvements to existing radio systems to be reviewed to assess duplication. The moratorium was not intended to disrupt equipment production scheduled for platform installation, but prohibited product improvements or modifications that duplicated Joint Tactical Radio System capabilities. In August 2001, the Under Secretary of Defense for Acquisition, Technology, and Logistics reemphasized the moratorium and included modified legacy radio systems under the moratorium.

## Objectives

The overall objective was to determine whether the allegations concerning mismanagement of the Aerial Targets Program have merit. See Appendix A for a discussion of the scope and methodology, Appendix B for an analysis of the allegations, and Appendix C for the audit response to the allegations.

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## **A. Radio Frequency Interference During Targets Testing**

The Air Force experienced radio frequency interference while it was using the GRDCS to test aerial targets because the frequency spectrum that the Air Force Aerial Targets Systems Program Office uses is subject to interference. The GRDCS is not scheduled for replacement until 2012, therefore, the Air Force Aerial Targets Systems Program Office could be vulnerable to continued interference during aerial targets testing until the Air Combat Command replaces GRDCS.

### **Allegation on Radio Frequency**

Two of the three allegation letters discussed the use of the commercial frequency and stated that the Air Force Aerial Targets Systems Program Office should switch from the commercial frequency because of interference and because the Air Force Frequency Management Office directed the switch. We substantiated the allegation of interference; however, we determined that the Air Force Frequency Management Office does not have the authority to require the Air Force Aerial Targets Systems Program Office to switch from the commercial frequency. Although the Air Force Aerial Targets Systems Program Office experienced interference with the frequency because commercial parties use the same frequency, Air Force Aerial Targets Systems Program Office personnel said that the program does not have the funding to switch frequencies. Appendix C discusses in more detail the commercial frequency that the Air Force Aerial Targets Systems Program Office uses for targets testing.

### **Targets Testing**

Section 2366, title 10, United States Code, requires that all new or improved weapon systems demonstrate lethality and survivability before they enter the production phase. Aerial targets are used to demonstrate lethality of weapon systems. The Air Force Aerial Targets Systems Program Office uses the GRDCS to test weapon systems. The GRDCS operates on a frequency band that is susceptible to interference. According to the Air Force, the majority of interference resulted from unscheduled or dual scheduled DoD users but the Air Force also acknowledged that it has experienced interference from an unknown source.

In November 2005, the Air Combat Command began drafting the Initial Capabilities Document for a system that will either replace or upgrade the GRDCS. In assessing the threat environment, the Air Combat Command recognized that the primary threat for the possible replacement or upgraded system was the exploitation of test data to gain an understanding of capabilities and vulnerabilities of weapon systems. The Air Combat Command is considering its frequency options for the replacement system for GRDCS. Because the Initial Capabilities Document indicates that the replacement or upgraded system does

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not need to be available until 2012, the Air Force Aerial Targets Systems Program Office remains vulnerable to interference when it uses the frequency during testing.

Therefore, until the Air Combat Command replaces GRDCS, it needs to mitigate the risk of the continued use of the frequency for aerial targets testing and assess the feasibility of accelerating the implementation milestones for the replacement system.

## Conclusion

We substantiated the allegation that the Air Force Aerial Targets Systems Program Office experienced interference during aerial targets testing with the GRDCS. Although the Air Force is replacing or upgrading the GRDCS, the immediate concern is that the Air Force will continue to experience interference during aerial targets testing. Consequently, the Air Combat Command should mitigate the risks associated with the continued use of the frequency during aerial targets testing and determine whether it should accelerate the implementation schedule for the replacement system for the GRDCS.

## Recommendation, Management Comments, and Audit Response

**Revised Finding and Recommendations.** As a result of management comments and additional audit work, we revised finding A and the corresponding recommendations to focus on the primary concern that the Air Force experienced interference during aerial targets testing because of the frequency it uses with the Gulf Range Drone Control System.

### A. We recommend that the Commander, Air Combat Command:

**1. Develop a plan to mitigate the risks association with the continued use of the frequency used for the Gulf Range Drone Control System.**

**2. Consider accelerating the implementation schedule for the replacement system for the Gulf Range Drone Control System.**

**Air Force Comments.** The Air Force nonconcurred with the recommendation, stating that the GRDCS operates on a Government frequency band that allows commercial use. Also, the Air Force stated that its license allows limited low-power non-Government users, although GRDCS takes precedence. The Air Force went on to say that the Federal Communications Commission previously forced non-Government users to shut down interfering equipment, and that procedures were in place to deconflict the frequency resource. The Air Force also stated that the potential disclosure of data was an issue of encryption rather than use of the frequency; the Air Force has a waiver for the unencrypted operation of the

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GRDCS, except for sensitive data that are encrypted and sent by a separate data link. Air Force stated that it will continue to operate GRDCS as is but will readdress issues with potential replacement target control systems.

**Audit Response.** The Air Force nonconcluded with the recommendation to migrate the GRDCS to a more secure frequency, stating that the frequency used is a Government frequency. However, the Air Force provided conflicting accounts on the radio frequency for the GRDCS. Although the Air Force comments state that the GRDCS operates on a Government frequency that allows commercial use, the previous director of the Air Force Aerial Targets Systems Program Office and the DoD Gulf Area Frequency Coordinator both stated that GRDCS operates on a commercial frequency. Also, the U.S. Frequency Allocations show that the frequency range includes Government and non-Government users. Regardless of the type of frequency, the primary concern is that the Air Force experienced interference while using the frequency during testing. Although the Air Force is reviewing frequency options for a replacement system for GRDCS, it remains vulnerable to interference until GRDCS is replaced. Therefore, we request that the Air Force consider the revised finding and recommendations and provide comments on the final report.

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## **B. Joint Tactical Radio System Reporting**

The Air Force Acquisition Executive did not report radio acquisitions that qualify for Joint Tactical Radio System reporting to the Assistant Secretary of Defense for Networks and Information Integration because the program offices did not know they were required to report the acquisitions. As a result, the Assistant Secretary does not have an accurate inventory of systems for the Joint Tactical Radio System within DoD and duplication of capabilities could occur.

### **Allegation of Waste**

The Air Force Aerial Targets Systems Program Office modified an existing contract to develop a replacement design for components for the QF-4 targets. The allegations stated that the parts will replace the same components that the MSTCS will replace, and therefore will be a waste of Government funds. Further, the allegations stated that the Air Force Aerial Targets Systems Program Office ignored a requirement for modified or new radios to be compliant with the Joint Tactical Radio System and that the MSTCS Program is exempt from compliance. We did not substantiate the allegation of waste for the replacement parts. We determined that the replacement parts, which were obtained under a contract modification referred to as the Obsolescence Engineering Change Proposal, replaced original parts that are no longer available but that are needed to convert QF-4 targets for testing. The replacement parts did not improve the capability of the original parts and, without the replacement parts, the Air Force Aerial Targets Systems Program Office would exhaust its inventory of QF-4 targets used for testing. The MSTCS Program, if it becomes operational, will not be available in time to meet this need. See Appendix C for the further discussion on the Obsolescence Engineering Change Proposal.

In assessing the portion of the allegation related to Joint Tactical Radio System compliance, we determined that because the replacement parts did not increase capability and were for a legacy system, the parts were exempt from compliance. We did, however, determine that since the Air Force Subscale Target System was a new system, it should comply with requirements for the Joint Tactical Radio System. Also, although the allegations stated that the MSTCS Program was exempt from compliance with the Joint Tactical Radio System, we determined that it is not exempt unless it has a waiver. Therefore, the Air Force Acquisition Executive must report both systems to the Assistant Secretary of Defense for Networks and Information Integration because they meet requirements for Joint Tactical Radio System compliance. See Appendix C for more details on the Joint Tactical Radio System compliance.

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## **DoD Radio Reporting Requirements**

In 1998, DoD recognized the need and the benefit of combining the various radio acquisition programs that incorporated programmable software technology. Therefore, the Assistant Secretary of Defense for Networks and Information Integration, issued policy memorandum, "Radio Acquisitions," August 28, 1998, which required Services and Component-unique programs be suspended unless the Assistant Secretary of Defense for Networks and Information Integration granted approval. The policy required that improvements to existing systems and new radio systems be reported to assess duplication with the Joint Tactical Radio System. Although the policy was not intended to disrupt equipment production scheduled for platform installation, it prohibited the acquisition of product improvements or modifications that duplicated planned capabilities of the Joint Tactical Radio System.

In policy memorandum, "Joint Tactical Radio System (JTRS) Defense Acquisition Board (DAB) Program Review," August 2, 2001, the Under Secretary of Defense for Acquisition, Technology, and Logistics reemphasized the moratorium on the acquisition or modification of radios and required that the systems comply with the Joint Tactical Radio System, unless the Component Acquisition Executive obtained a waiver. In May 2005, the Assistant Secretary of Defense for Networks and Information Integration temporarily suspended the Joint Tactical Radio System waiver process. During the suspension, Acquisition Executives are required to inform the Assistant Secretary of Defense for Networks and Information Integration of legacy procurements using a streamlined version of the Joint Tactical Radio System waiver questionnaire.

## **Air Force Radio Acquisitions**

The Air Force Aerial Targets Systems Program Office purchased replacement parts under the Obsolescence Engineering Change Proposal that are needed to convert aircraft for the full-scale aerial target. Because the full-scale target is a legacy system, the replacement parts are exempt from Joint Tactical Radio System reporting. However, the Air Force Aerial Targets Systems Program Office purchased the Air Force Subscale Aerial Target to replace legacy subscale targets. Because the Air Force Subscale Target System is a new acquisition, it must comply with requirements for the Joint Tactical Radio System. Further, because the MSTCS Program is also a new acquisition, it must also comply with the Joint Tactical Radio System requirements. Therefore, the Air Force Acquisition Executive must report both systems to the Assistant Secretary of Defense for Networks and Information Integration. In addition, the Air Force Acquisition Executive needs to issue guidance to remind program offices of the requirement to report Air Force radio acquisitions that qualify for Joint Tactical Radio System reporting.

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## Conclusion

We did not substantiate the allegation that the replacement parts for the Obsolescence Engineering Change Proposal were a waste of Government funds because they duplicated components of the MSTCS. The replacement parts did not improve capabilities of the original parts and were needed to convert the QF-4 targets. The MSTCS Program, if it becomes operational, will not be available in time to meet this need. Also, the replacement parts were exempt from the Joint Tactical Radio System reporting because the QF-4 target is a legacy system.

We substantiated the allegation that new systems, including the Air Force Subscale Target System, met reporting requirements for Joint Tactical Radio System compliance. Also, although the allegation stated that the MSTCS Program was exempt from compliance, we determined that it was not exempt. Based on requirements of both policy memorandums, the Air Force Acquisition Executive needs to report both systems. In addition, the Air Force Acquisition Executive needed to provide program offices guidance on the Joint Tactical Radio System reporting requirements.

## Recommendation, Management Comments, and Audit Response

**Recommendation Revised.** As a result of management comments, we revised recommendation B.2.

### **B. We recommend that the Air Force Acquisition Executive:**

**1. Report the Air Force Subscale Target System and the Multi-Service Target Control System programs to the Assistant Secretary of Defense for Networks and Information Integration to allow assessment of duplication with the Joint Tactical Radio System.**

**2. In addition to issuing guidance to remind program offices of the requirement to report Air Force radio acquisitions that qualify for Joint Tactical Radio System reporting, determine whether program offices received the guidance and were reporting their programs as required.**

**Air Force Comments.** The Air Force partially concurred with the recommendation and agreed to report the Air Force Subscale Target System by August 31, 2006. However, Air Force stated that MSTCS is now an Army-led program and should be reported by the Army. The Air Force also provided a copy of the guidance provided to Air Force components on the temporary suspension of the Joint Tactical Radio System Waiver Process.

**Audit Response.** We consider the Air Force comments to be partially responsive. The Air Force concurred with the recommendation to report the Air Force Subscale Target System and stated that it will report the program by August 31, 2006. We will consider the action for reporting the Air Force Subscale Target

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System to be complete pending receipt of documentation showing that the Air Force reported the program. The Air Force nonconcurred with reporting the MSTCS Program because it stated that the MSTCS Program is an Army-led program. However, we verified with the MSTCS Program Office that the MSTCS Program is still an Air Force program. Until the program management for MSTCS is officially assigned to the Army, the Air Force remains responsible for reporting the program.

We commend the Air Force for taking immediate action to address reporting requirements for Joint Tactical System Radio during the suspension of the waiver process. Unfortunately, Air Force components either ignored or were unaware of the guidance to report programs that qualify for the Joint Tactical Radio System. In addition to issuing guidance, Air Force should also follow up to determine that the appropriate program offices actually receive and follow the guidance because the programs that we reviewed had not been reported. Therefore, we request that the Air Force reconsider its position for the MSTCS Program and comment on actions it will take to get program offices to report programs that qualify for the Joint Tactical Radio System.

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## Appendix A. Scope and Methodology

We performed the audit to examine allegations to the Defense Hotline that the Air Force Aerial Targets Systems Program Office wasted Government assets in its management of the Aerial Targets Program. Three anonymous letters alleged that the Air Force Aerial Targets Systems Program Office wasted funds in issuing contract modifications, scheduling MSTCS' implementation, transition planning, cost estimating, frequency management, and complying with DoD policy.

We reviewed documents dated from July 1983 through May 2005. We reviewed the draft Initial Capabilities Document for the GRDCS and the Test Capabilities Requirements Document for the MSTCS. We reviewed guidance for the CTEIP. We reviewed policy requiring communication systems to be interoperable with the Joint Tactical Radio System. We interviewed personnel from the Air Force Aerial Targets Systems Program Office, the MSTCS Program Office, the 53rd Weapons Evaluation Group, the 96th Communications Group, the Frequency Management Office in Florida, and officials in the Office of the Assistant Secretary of Defense for Networks and Information Integration, the Office of the Assistant Secretary of the Air Force Acquisition, the Air Force Test and Evaluation Directorate, the CTEIP Program Office, and the Air Combat Command in Virginia. We performed this audit from May 2005 through January 2006 in accordance with generally accepted government auditing standards. We initially started the audit in September 2003 but suspended it because of higher priorities pertaining to the Base Realignment and Closure validation.

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

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

### Prior Coverage

During the last 5 years, the Department of Defense Inspector General (DoD IG) has issued one report discussing CTEIP projects. Unrestricted DoD IG reports can be accessed at <http://www.dodig.mil/audit/reports>.

### DoD IG

DoD IG Report No. D-2004-097, "The Central Test and Evaluation Investment Program," June 30, 2004

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## Appendix B. Analysis of the Allegation Letters

We performed the audit to review allegations to the Defense Hotline that the Air Force Aerial Targets Systems Program Office wasted Government assets in administering the Aerial Targets Program. We received three allegation letters (dated June 17, 2003, September 30, 2004, and November 14, 2004) from an anonymous complainant alleging the waste. We analyzed the three letters and identified 24 areas of concern in the three letters. Because the 24 areas of concern overlapped, we identified the 6 primary areas of concern as follows:

1. The Obsolescence Engineering Change Proposal was used to obtain parts that duplicate the capabilities of MSTCS.
2. The Aerial Target Program Office's implementation schedule for MSTCS is too long.
3. The Aerial Target Program Office's estimated cost to implement MSTCS is overstated.
4. The Air Force had no transition plan for MSTCS and did not consider using Global Positioning System technology for target tracking.
5. The Air Force Aerial Targets Systems Program Office uses a commercial frequency for tracking targets.
6. The Air Force ignored the Joint Tactical Radio System's reporting requirement for the Obsolescence Engineering Change Proposal, and the Air Force Subscale Aerial Target.

The following table shows the areas we identified in the allegation letters and how we assigned them to the 6 primary areas (Appendix C provides further discussion of the 6 areas). In some cases, we either paraphrased or made minor editorial changes to clarify the meaning. Also, we covered all of the areas during the audit but we did not necessarily include the complete discussion if the results were covered indirectly by the subject area (see 15, 16, 19, 20, and 21).

## Areas of Concern in the Three Allegation Letters

Hotline Areas of Concern	Allegation Letter			Primary Area in Appendix C
	1	2	3	
1. The Obsolescence Engineering Change Proposal is a waste of money	X	X	X	1
2. Consider adding Global Positioning System	X			4
3. Aerial Targets uses a commercial frequency that is subject to interference	X		X	5
4. The estimated schedule for MSTCS is too long			X	2
5. Aerial Targets has no transition plan for MSTCS			X	4
6. The estimated cost for MSTCS is overstated		X		3
7. Cost for MSTCS is too high		X		3
8. MSTCS does not have to comply with the Joint Tactical Radio System requirement		X		6
9. Aerial Targets ignored the requirement to report the Obsolescence Engineering Change Proposal and Air Force Sub Scale Aerial Target for the Joint Tactical Radio System		X		6
10. Not switching from the commercial frequency will cost more later		X		5
11. Air Force Frequency Management Office told Aerial Targets to switch from the commercial frequency		X		5
12. Aerial Targets planned to implement MSTCS for the last buy of the QF-4 target		X		2
13. 42 months needed to incorporate MSTCS into the Q-4 target		X		2
14. 42 months needed to incorporate MSTCS into Air Force Subscale Aerial Target		X		2
15. The Navy cost estimate is lower than Aerial Targets' cost estimate		X		3*
16. Army will use MSTCS, but Aerial Targets will not		X		4*
17. Aerial Targets needs 4 years to field MSTCS		X		2
18. Aerial Targets has no justification for the Obsolescence Engineering Change Proposal		X		1
19. Aerial Targets supports the Next Generation Target Control System, but not MSTCS*		X		4*
20. Aerial Targets identified additional test costs for complete QF-4 full-scale aerial target testing requirements		X		3*
21. Aerial Targets identified additional testing requirement after initial testing requirements identified		X		3*
22. Lack of Air Combat Command support for additional CTEIP funding		X		3
23. No transition plan to use MSTCS at Tyndall Air Force Base		X		4
24. Lack of Aerial Targets discussion on cost estimates for MSTCS		X		3

\*Coverage of the Hotline issue may not be apparent but is included indirectly.

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## Appendix C. Audit Response to the Allegations

We received three letters alleging waste and mismanagement in the Aerial Targets Program. We analyzed the letters to identify the areas of concern addressed in the allegation letters. Although we identified 24 areas in the 3 letters, we determined that some had common subject areas. We determined that the 24 areas addressed 6 primary areas. Appendix B shows how we assessed the 24 areas of concern and assigned them to the 6 primary areas. Our discussion of the areas of concern follows.

**1. The Obsolescence Engineering Change Proposal was used to obtain parts that duplicate the capabilities of MSTCS.** The Air Force Aerial Targets Systems Program Office modified an existing contract to develop a replacement design for components in the QF-4 target. The components will replace the same components that the MSTCS will replace, and therefore wastes Government funds.

**Audit Response.** We did not substantiate this area of concern because the modification was needed. We confirmed that the Air Force Aerial Targets Systems Program Office did modify an existing contract to develop a replacement design for components in one of its test targets, the QF-4 target. However, the Air Force Aerial Targets Systems Program Office required the contract modification, called the “Obsolescence Engineering Change Proposal,” to develop replacement parts that are needed to convert F-4 aircraft into QF-4 targets because the original parts are no longer available. The replacement parts perform the same functions as the original parts and do not improve the capability of the original parts. The Air Force Aerial Targets Systems Program Office provided documentation to show that it would exhaust the inventory of the remaining QF-4 targets without the contract modification. If purchased by the Air Force Aerial Targets Systems Program Office, the MSTCS has an estimated development and test period of 39 months and will not provide a useful target until early 2009. An additional 2 years is required to build a QF-4 target using the MSTCS. Consequently, the QF-4 targets would not be available until early 2011 and the Air Force Aerial Targets Systems Program Office would have a 2-year gap in availability of the QF-4 targets. Although we confirmed that the Air Force Aerial Targets Systems Program Office modified a contract for a replacement design for components in the QF-4 targets, we determined that the contract modification was needed to obtain replacement parts that are no longer available, do not improve capability of the original parts, and are needed to support the target testing mission.

**2. The Air Force Aerial Targets Systems Program Office implementation schedule for MSTCS is too long.** The Air Force Aerial Targets Systems Program Office is taking too long to field the MSTCS for the QF-4 target and the Air Force Subscale Aerial Target.

**Audit Response.** We did not substantiate this area of concern because the Air Force Aerial Targets Systems Program Office does not control testing or funding of the system. The Air Force Aerial Targets Systems Program Office provided an estimate of about 39 months of development and testing to use the MSTCS with

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the QF-4 target. Additional redesign will be needed to use the MSTCS with the Air Force Subscale Aerial Target. The schedules are not relevant for the Air Force Aerial Targets Systems Program Office because it does not plan to use the MSTCS for either target unless and until the system meets mission requirements. The MSTCS was restructured twice and the reduced scope version of the MSTCS will not meet the testing requirements of the Air Force Aerial Targets Systems Program Office to track four targets, four missiles, and four shooters. Also, the Air Combat Command informed us that they have not provided the Air Force Aerial Targets Systems Program Office funding to field the MSTCS. Until the MSTCS meets testing requirements and the Air Combat Command provides funding, the Air Force Aerial Targets Systems Program Office will not field the MSTCS.

**3. The estimated cost for the Air Force Aerial Targets Systems Program Office to implement MSTCS is overstated.** The Air Force Aerial Targets Systems Program Office significantly overstated the estimated cost to implement the MSTCS. Also, the Air Combat Command did not support the MSTCS Program Office in obtaining additional CTEIP funding.

**Audit Response.** We did not substantiate this area of concern. The complainant discusses cost growth that escalated from \$50 million to \$150 million but did not provide supporting data to evaluate the basis for the estimates quoted in the allegation letter. The Air Force Aerial Targets Systems Program Office provided an estimate of \$120.5 million in the FY 2006 budget request that estimated the cost of scenarios such as switching to the MSTCS, which includes the Global Positioning System, beginning encryption of data transmission, changing to a protected frequency, and complying with the Joint Tactical Radio System policy. We compared the FY 2006 estimate to a June 2003 estimate of \$70.9 million. The reason for the disparity in the two estimates is that the estimates were based on different assumptions for compliance with the Joint Tactical Radio System and data encryption. The June 2003 estimate contained no cost data for Joint Tactical Radio System compliance but the FY 2006 estimate included \$29 million. Also, the June 2003 estimate for data encryption was \$8.3 million. This increased to \$19.8 million for the FY 2006 estimate. The combined difference for the two assumptions is \$40.5 million. After deducting Joint Tactical Radio System compliance and the data encryption costs, the June 2003 estimate was \$62.6 million and the FY 2006 estimate was \$71.6 million. Consequently, we determined that the estimates are within such a narrow range that it would be difficult to determine whether one is significantly overstated. In addition, the Air Force Test and Evaluation Directorate, rather than the Air Combat Command, is the proponent for obtaining additional CTEIP funding.

**4. The Air Force Aerial Targets Systems Program Office has no transition plan for MSTCS and did not consider using Global Positioning System technology for target tracking.** The Air Force Aerial Targets Systems Program Office did not adequately plan the transition of the MSTCS into the production phase. The Aerial Targets Program Office has no formal transition plan for the MSTCS at Tyndall Air Force Base and did not consider adding Global Positioning System technology for target tracking, which wastes taxpayer dollars.

**Audit Response.** We did not substantiate the area of concern because the Air Force Aerial Targets Systems Program Office does not control the testing or

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funding for the system. According to the Air Force Aerial Targets Systems Program Office, it will not develop a transition plan for the MSTCS until it is assured that the MSTCS will perform the testing mission required. Because the Air Force had not determined whether it will use the system, there is no established need for a transition plan. Also, the Air Combat Command stated that it had not provided funding to transition to the MSTCS. Until the Air Force Aerial Targets Systems Program Office receives funding, it can not transition to the MSTCS technology. The Initial Capabilities Document that is being developed states that switching to a Global Positioning System method for tracking is one of several options being considered.

**5. The Air Force Aerial Targets Systems Program Office uses a commercial frequency for testing targets.** The Air Force Aerial Targets Systems Program Office should switch its testing frequency from the commercial band 915 megahertz frequency spectrum to avoid interference. Also, the Air Force Frequency Management Office told the Air Force Aerial Targets Systems Program Office to move from the 915 megahertz frequency band.

**Audit Response.** We substantiated that the use of the frequency is causing interference. The Air Force Aerial Targets Systems Program Office uses the GRDCS, which operates on a 915 megahertz commercial frequency band, and experiences interference with tests on the frequency because commercial industry uses the same frequency. However, the Air Force Aerial Targets Systems Program Office stated that it does not have the funding to switch frequencies. The Air Combat Command is drafting the Initial Capabilities Document that includes options for the use of the Global Positioning System for target control. The draft Initial Capabilities Document contains a comparison of alternative frequencies, and also contains an analysis of whether the Air Force should switch to the Global Positioning System for tracking. If the Air Combat Command establishes requirements for the frequency change, it must also fund the switch. The Air Force is also considering its options to avoid interference with the commercial frequency and acknowledged that it has problems with the 915 megahertz frequency. The Air Force Frequency Management Office recommended that the Air Force Aerial Targets Systems Program Office change from the 915 megahertz frequency to either a military-only frequency or a noncommercial frequency. However, the Air Combat Command, not the Air Force Frequency Management Office, has the authority to direct frequency change. See the Finding section for a more detailed discussion on the frequency change.

**6. The Air Force ignored the Joint Tactical Radio System reporting requirement for the Obsolescence Engineering Change Proposal and the Air Force Subscale Aerial Target.** The Air Force Aerial Targets Systems Program Office ignored the requirement for modified or new radios to be compliant with the Joint Tactical Radio System. The MSTCS is exempt and does not need to comply with the Joint Tactical Radio System.

**Audit Response.** We substantiated that two systems should be reported to reflect an accurate inventory of radio systems. We determined that the Air Force Acquisition Executive is required to report the Air Force Subscale Aerial Target and the MSTCS Programs, based on the Joint Tactical Radio System policy. Under Secretary of Defense for Acquisition, Technology, and Logistics

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memorandum, "Joint Tactical Radio System (JTRS) Defense Acquisition Board (DAB) Program Review," August 2, 2001, requires the reporting of radio acquisitions and modifications. The Air Force Aerial Targets Systems Program Office developed replacement parts for the QF-4 target legacy system under the Obsolescence Engineering Change Proposal because original parts are no longer available. The replacement parts did not change the capabilities of the original parts for the QF-4 target. Further, the replacement parts are for a legacy system and are not subject to the Joint Tactical Radio System reporting. Conversely, the Air Force Subscale Aerial Target is for a new acquisition. Therefore, the system must comply with the Joint Tactical Radio System requirements.

The MSTCS Program Office, which is also developing a new system, stated that its system was not required to comply with the Joint Tactical Radio System. Officials at the Office of the Assistant Secretary of Defense for Networks and Information Integration disagreed. According to the officials, a new or modified radio must be compliant with the Joint Tactical Radio System policy unless it has a waiver. Assistant Secretary of Defense for Networks and Information Integration memorandum, "Joint Tactical Radio System (JTR) Waiver Process," November 24, 2004, established procedures for submitting waivers for radio frequency equipment acquisitions. Although the Assistant Secretary of Defense for Networks and Information Integration temporarily suspended the waiver process in May 2005, the requirement for radio acquisitions to comply with the Joint Tactical Radio System continues. Consequently, the Air Force Acquisition Executive needs to report the systems for the Air Force Subscale Aerial Target and the MSTCS Programs. See the Finding section for a discussion on the Joint Tactical Radio System reporting.

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## **Appendix D. Report Distribution**

### **Office of the Secretary of Defense**

Under Secretary of Defense (Comptroller)/Chief Financial Officer  
Deputy Chief Financial Officer  
Deputy Comptroller (Program/Budget)  
Assistant Secretary of Defense (Networks and Information Integration)  
Director, Program Analysis and Evaluation

### **Department of the Navy**

Naval Inspector General  
Auditor General, Department of the Navy

### **Department of the Air Force**

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

### **Non-Defense Federal Organization**

Office of Management and Budget

### **Congressional Committees and Subcommittees, Chairman and Ranking Minority Member**

Senate Committee on Appropriations  
Senate Subcommittee on Defense, Committee on Appropriations  
Senate Committee on Armed Services  
Senate Committee on Governmental Affairs  
House Committee on Appropriations  
House Subcommittee on Defense, Committee on Appropriations  
House Committee on Armed Services  
House Committee on Government Reform  
House Subcommittee on Government Management, Finance, and Accountability  
Committee on Government Reform  
House Subcommittee on National Security, Emerging Threats, and International Relations, Committee on Government Reform  
House Subcommittee on Technology, Information Policy, Intergovernmental Relations, and the Census, Committee on Government Reform



# Office of the Assistant Secretary of the Air Force (Acquisition) Comments

Final Report  
Reference



DEPARTMENT OF THE AIR FORCE  
WASHINGTON, DC

– 5 JUL 2006

OFFICE OF THE ASSISTANT SECRETARY

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

FROM: SAF/AQ

SUBJECT: DoDIG Draft Audit Report, Allegations Concerning Mismanagement of the Aerial  
Targets Program, (Project No. D2005AB-0199)

This is in reply to your memorandum requesting the Assistant Secretary of the Air Force (Financial Management and Comptroller) provide Air Force comments on subject report. The Air Force concurs with one of the two substantiated findings in the draft DoDIG report as discussed below:

1. Substantiated Finding A – The Aerial Targets System Program Office (SPO) uses a commercial frequency for its Gulf Range Drone Control System (GRDCS), raising the potential for interference and disclosure of test results.

Response to interference issue: GRDCS operates under a Radio Frequency Authorization (RFA) granted by the Air Force Frequency Management Agency (AFFMA). The license allows operation on the 915MHz frequency through January 2010, with options to request extensions. Contrary to the draft report's conclusion, 915MHz is a government—not commercial—frequency band. The license does allow limited low-power non-government use, but GRDCS takes precedence. The FCC has previously forced non-government users to shut down interfering equipment, and procedures are in place to deconflict the frequency resource.

Response to disclosure issue: Potential disclosure of test data is less an issue of frequency than an issue of encryption. AF/SCT provided a waiver in April 1990 for the non-encrypted operation of GRDCS, with the exception of missile telemetry and scoring data. Thus, while primary GRDCS drone control signals are not encrypted, any sensitive data is encrypted and downlinked via a completely separate telemetry data link.

Summary: The Air Force disagrees with Substantiated Finding A and will operate the GRDCS system according to current RFA and waivers. As suggested in the DODIG Draft Report, potential replacement target control systems, when funded, will readdress each issue.

2. Substantiated Finding B – The Air Force Subscale Target System and the Multi-Service Target Control System (MSTCS) must be reported to the Assistant Secretary of Defense for Networks and Information Integration in order to comply with Joint Tactical Radio System (JTRS) reporting requirements. Additionally, the AFAE should issue guidance to program offices regarding JTRS reporting requirements.

Response to AF Subscale Target System JTRS waiver issue: The BQM-167A AF Subscale Aerial Target (AFSAT) was designed to operate with the legacy GRDCS system.

Revised

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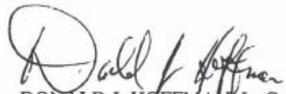
Although the RF components within AFSAT predate the JTRS waiver requirement, the AF agrees that the AFSAT needs to be reported as a new program using RF, despite integrating with a legacy target control system.

Response to MSTCS JTRS waiver issue: MSTCS was originally Air Force led, but is now an Army-led program.

Response to issuance of JTRS guidance issue: Subsequent to the June 2003 – November 2004 allegations which precipitated this DoDIG Draft Report, the AFAE, through the Information Dominance Directorate, issued guidance requiring AF radio acquisition reporting per the OSD NII JTRS reporting guidance. In light of this 23 May 2005 guidance, the AF considers the action closed.

Summary: The Air Force agrees with Substantiated Finding B and will report AFSAT to the Assistant Secretary of Defense for Networks and Information Integration. This task will be accomplished by 31 August 06.

The SAF/AQPW point of contact is Maj Jess Drab, 588-7168, 1500 Wilson Blvd 11-610, Fax 588-6199 and E-mail jess.drab@pentagon.af.mil.



DONALD J. HOFFMAN, Lt Gen, USAF  
Military Deputy, Office of the Assistant  
Secretary of the Air Force (Acquisition)

Attachments:

1. DoDIG Draft Report
2. Air Force Guidance on Temporary Suspension of the Joint Tactical Radio System (JTRS) Waiver process, 27 May 05



DEPARTMENT OF THE AIR FORCE  
WASHINGTON, DC

21 MAY 2005

OFFICE OF THE ASSISTANT SECRETARY

MEMORANDUM FOR SEE DISTRIBUTION

FROM: SAF/AQI  
1060 Air Force Pentagon  
Washington DC 20330-1060

SUBJECT: Air Force Guidance on Temporary Suspension of the Joint Tactical Radio System (JTRS) Waiver Process

Reference: Office of the Assistant Secretary of Defense for Networks and Information Integration (OASD(NII)) Memorandum, Temporary Suspension of the Joint Tactical Radio System (JTRS) Waiver Process, 23 May 2005

As highlighted in the reference memorandum, OASD(NII) temporarily suspended the JTRS Waiver Process effective 23 May 05. However, the policy still requires notification of a waiver request prior to procurement. The term "temporary suspension" implies that the process may soon be reinstated; therefore, we must still plan our programs for the JTRS migration and continue to review requirements.

More specifically, the memorandum directs the Service Acquisition Executives to notify OASD(NII), in the form of attached streamlined version of JTRS Waiver questionnaire, 10 days prior to procurement (or six months prior for multi-year options). *"Multi-year contracting vehicles may be used, provided such acquisitions can be stopped at any time without penalty to the government."* It also directs the Services to continue to comply with existing policy for interoperability, standardization and best value to the Department of Defense. Finally, the memorandum strictly forbids the Services from beginning new research and development activities for any radio system, to include software reprogrammable radio technologies that may supplant the current JTRS Program of Record.

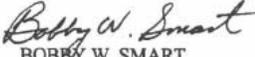
In order to comply with this OSD-direction, HAF must still analyze requests to procure legacy radios. As such, this office provides the following additional guidance:

1) Air Force Command and Control Intelligence Surveillance Reconnaissance Center (AFC2ISRC): Continue to serve as lead command for the JTRS program and continue to serve as the initial point of contact in the coordination and review process for all USAF requests for waivers prior to submission to Headquarters Air Force. It is vital that the AFC2ISR Center continue to ensure that the procurement of legacy radios does not make the Air Force's JTRS Migration Plan non-viable.

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2) Program Managers (and/or other interested parties): Contact the AFC2ISR Center and provide answers to NII's streamlined JTRS Waiver questionnaire. Allow sufficient time for HAF coordination (we suggest 2-months) in front of the 10-day notification period prior to procurement. Also, please allow 3 months in front of the six-month notification period prior to procurement for multi-year contracting.

If you require further details regarding the Air Force's part of this effort, my POC is Lt Col Eric Gunzelman, DSN 425-6436.

  
BOBBY W. SMART  
Director, Information Dominance Programs  
Assistant Secretary (Acquisition)

Attachment:  
OASD(NII) Memorandum, "Temporary Suspension of the JTRS Waiver Process", 23 May 2005

## **Team Members**

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

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