



INSPECTOR GENERAL

Department of Defense

JULY 19, 2013



Defense Advanced Research Projects Agency Properly Awarded Contracts for Disc-Rotor Research and Development



INTEGRITY ★ EFFICIENCY ★ ACCOUNTABILITY ★ EXCELLENCE

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Mission

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Results in Brief

Defense Advanced Research Projects Agency Properly Awarded Contracts for Disc-Rotor Research and Development

July 19, 2013

Objective

We conducted this audit in response to a congressional request for the DoD Inspector General to investigate a constituent's complaint concerning an improper contract award for disc-rotor technology. We determined whether Defense Advanced Research Projects Agency (DARPA) personnel complied with Federal laws and DoD guidance when awarding contracts to The Boeing Company (Boeing) for disc-rotor technology research and development.

Findings

DARPA personnel followed Federal and DoD acquisition regulations when awarding two contracts for disc-rotor technology research and development to Boeing. The total obligated value of the contracts was about \$8.9 million as of June 20, 2013. Specifically DARPA personnel:

- properly awarded contract HR0011-07-C-0076 to Boeing on June 25, 2007, for \$499,972, to perform a seedling concept study, a disc-rotor research effort, with Virginia Polytechnic Institute and State University (VPI). DARPA contracting personnel competitively awarded the contract based on Boeing's white paper and subsequent proposal submission to Broad Agency Announcement 06-15 to develop innovative ideas in the areas of aerospace systems and tactical

Findings Continued

multipliers. DARPA personnel received 147 white paper topic submissions and 72 proposals to Broad Agency Announcement 06-15.

- properly awarded contract HR0011-09-C-0056 to Boeing on January 30, 2009, for about \$7.3 million. DARPA contracting personnel properly awarded the noncompetitive contract as a logical follow-on to the earlier effort conducted by Boeing and VPI.
- followed appropriate procedures when responding to the complainant's white paper and proposal submissions. DARPA personnel responded to three of four white paper submissions with a recommendation based on the relevance to the mission and a preliminary technical assessment. Finally, DARPA personnel appropriately notified the complainant that his proposals were not selected for award based on their evaluation.

Overall, DARPA personnel complied with a fair and competitive contract award process for disc-rotor technology research and development. DARPA personnel openly competed the procurement, properly solicited, and properly awarded disc-rotor technology contracts to Boeing.

Comments

No written response to this report was required. Therefore, we are publishing this report in final form.



INSPECTOR GENERAL
DEPARTMENT OF DEFENSE
4800 MARK CENTER DRIVE
ALEXANDRIA, VIRGINIA 22350-1500

July 19, 2013

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION,
TECHNOLOGY, AND LOGISTICS
DIRECTOR, DEFENSE ADVANCED RESEARCH PROJECTS AGENCY

SUBJECT: Defense Advanced Research Projects Agency Properly Awarded Contracts for
Disc-Rotor Research and Development (Report No. DODIG-2013-106)

We are providing this report for your information and use. We conducted this audit in response to a congressional request on May 8, 2012, requesting the Department of Defense Inspector General investigate a constituent's complaint concerning an improper contract award for the research and development of disc-rotor technology to The Boeing Company.

Defense Advanced Research Projects Agency (DARPA) personnel followed Federal and DoD acquisition regulations when awarding contracts HR0011-07-C-0076 and HR0011-09-C-0056 for the research and development of disc-rotor technology to The Boeing Company. Also, DARPA personnel followed proper procedures in addressing the complainant's white paper topic submissions, proposals, and letters. Therefore, the complainant's allegations were not substantiated. We did not make a determination on the allegation that DARPA personnel improperly awarded contracts to Boeing that infringed on the complainant's patents for disc-rotor blade technology. Defense Federal Acquisition Regulation Supplement (DFARS) Part 227 provides private parties with a process for filing administrative claims for patent infringement against DoD Components. A civil suit for patent infringement against the United States may also be filed in the U.S. Court of Federal Claims under section 1498, title 28 United States Code.

No written response to this report was required, and we are publishing this report in final form.

We appreciate the courtesies extended to the staff. Please direct questions to me at (703) 604-9077 (DSN 664-9077).


Jacqueline L. Wicecarver
Assistant Inspector General
Acquisition, Parts, and Inventory

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Acronyms and Abbreviations



Introduction

Objective

Our objective was to determine whether Defense Advanced Research Projects Agency (DARPA) personnel complied with Federal laws and DoD guidance when awarding contracts to The Boeing Company (Boeing) for disc-rotor technology research and development (R&D). In addition, the audit addressed allegations raised in the congressional request. Please see Appendix A for scope and methodology.

Background

This audit report is in response to a congressional request (Appendix B) from Senator Sherrod Brown and a constituent's allegations relating to contracts improperly awarded for disc-rotor technology R&D. According to the allegations, DARPA personnel improperly:

- awarded a \$1 million study program to Virginia Polytechnic Institute and State University (VPI) to analyze the disc-rotor;
- awarded a \$9 million noncompetitive contract for a disc-rotor with telescoping storing blades to Boeing;
- denied about 10 of the constituent's submittals to broad agency announcements during the period 1993 through 2009; and
- awarded contracts that infringed on his patents for disc-rotor blade technology.

The complainant holds a U.S. patent for a disc-rotor vertical lift aircraft with component blades that can be stored in the disc. According to the patent, the disc enables the aircraft to function as a helicopter when the blades are extended.

Defense Advanced Research Projects Agency

DARPA was created as the Advanced Research Projects Agency in 1958 and established February 17, 1995, by DoD Directive 5134.10 "Defense Advanced Research Projects Agency (DARPA)." This directive established DARPA's mission to serve as the central R&D organization of DoD with a primary responsibility to maintain U.S. technological superiority over potential adversaries.

Broad Agency Announcement Process

DARPA primarily announces funding opportunities through broad agency announcements (BAAs) or research announcements and requests for proposals. Federal Acquisition Regulation (FAR) 35.016, “Broad Agency Announcement,” states:

BAAs with Peer or Scientific Review are used for the acquisition of basic and applied research and that part of development not related to the development of a specific system or hardware procurement. BAAs may be used by agencies to fulfill their requirements for scientific study and experimentation directed toward advancing the state-of-the-art or increasing knowledge or understanding rather than focusing on a specific system or hardware solution.

Contract Awards Using the Broad Agency Announcements

DARPA solicits and evaluates proposals for R&D awards through BAAs. The process in place at the time of the initial disc-rotor contract award was established within DARPA’s internal guidance, including but not limited to: DARPA Instruction No. 13, “Program Funds Commitment, and Acquisition Procedures,” September 9, 1996 (hereby canceled).¹ To award a contract through a BAA, DARPA personnel use a scientific review as prescribed in FAR 35.016 to determine what proposal(s) should receive funding based on evaluation criteria and the relative importance of those criteria. The evaluation process requires a minimum of four Government evaluators or as otherwise approved by the Director, DARPA, to analyze the proposal to determine whether it meets the requirements and evaluation criteria established with the BAA. The key individuals responsible for evaluating proposals include the program manager, reviewers, non-voting subject matter experts, and the Source Selection Authority. The reviewers determine whether proposals are “selectable” or “non-selectable.” Subject matter experts may review portions of the proposal. The program manager reviews the proposal, evaluation reports, and any subject matter expert worksheets and determines what proposals are selectable to begin negotiations to award a contract. The Funding Authority, in consultation with the Source Selection Authority, reviews the program manager’s recommendations and makes the final determination for proposals that may receive funding.

Competitive Broad Agency Announcement Awards

The “Competition in Contracting Act,” implemented in section 2304, title 10, United States Code states that agencies shall obtain full and open competition through the use of competitive procedures in accordance with the FAR. FAR 6.101, “Policy,” requires,

¹ DARPA Instruction No.13 was revised and reissued on February 11, 2008.

“with certain limited exceptions . . . that contracting officers shall promote and provide for full and open competition in soliciting offers and awarding Government contracts.” Competitive procedures to meet the requirement include sealed bids, competitive proposals, combination of competitive procedures, or other competitive procedures. FAR 6.102, “Use of Competitive Procedures,” states:

Competitive selection of basic and applied research and that part of development not related to the development of a specific system or hardware procurement is a competitive procedure if award results from --

- (i) a broad agency announcement that is general in nature identifying areas of research interest, including criteria for selecting proposals, and soliciting the participation of all offerors capable of satisfying the Government’s needs; and
- (ii) a peer or scientific review.

See Appendix C for FAR criteria.

Review of Internal Controls

DoD Instruction 5010.40, “Managers’ Internal Control Program Procedures,” July 29, 2010, requires DoD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. We did not identify any internal control weaknesses as they applied to the audit objective.

Finding

Personnel Properly Awarded Disc-Rotor Research and Development Contracts to Boeing

DARPA personnel followed Federal and DoD acquisition regulations when awarding two contracts for disc-rotor technology R&D to Boeing. The total obligated value of the contracts was about \$8.9 million as of June 20, 2013. Specifically DARPA personnel:

- properly awarded contract HR0011-07-C-0076 to Boeing on June 25, 2007, for \$499,972, to perform a seedling concept study, a disc-rotor research effort, with VPI. DARPA contracting personnel competitively awarded the contract based on Boeing's white paper and subsequent proposal submission to BAA 06-15 to develop innovative ideas in the areas of aerospace systems and tactical multipliers. DARPA personnel received 147 white paper topic submissions and 72 proposals to BAA 06-15.
- properly awarded contract HR0011-09-C-0056 to Boeing on January 30, 2009, for about \$7.3 million. DARPA contracting personnel properly awarded the noncompetitive contract as a logical follow-on to the earlier effort conducted by Boeing and VPI. On September 4, 2008, DARPA personnel issued Special Notice 08-55 to notify the public of their intent to award a noncompetitive contract to Boeing for the continuation (Phase 1) of the disc-rotor program. On February 3, 2009, DARPA personnel issued an award notice to Boeing for a Phase 1 of the disc-rotor risk-reduction study.
- followed appropriate procedures when responding to the complainant's white paper and proposal submissions. DARPA personnel responded to three of four white paper submissions with a recommendation based on the relevance to the mission and a preliminary technical assessment. Finally, DARPA personnel appropriately notified the complainant his proposals were not selected for award based on their evaluation.

Overall, DARPA personnel complied with a fair and competitive contract award process for disc-rotor technology R&D. DARPA personnel openly competed the procurement, properly solicited, and properly awarded disc-rotor technology contracts to Boeing.

Allegations and DoD Inspector General Responses

Senator Brown requested that the DoD Inspector General (DoD IG) address his constituent's complaints about DARPA personnel improperly awarding contracts for disc-rotor technology. We did not substantiate complaints that DARPA personnel improperly:

- awarded a \$1 million study program to VPI to analyze the disc-rotor,
- awarded a \$9 million noncompetitive contract for a disc-rotor with telescoping storing blades to Boeing, and
- denied about 10 of the constituent's submittals to BAAs during the period 1993 through 2009.

We did not make a determination on the allegation that DARPA personnel improperly awarded contracts to Boeing that infringed on the complainant's patents for disc-rotor blade technology. Defense Federal Acquisition Regulation Supplement (DFARS) subpart 227.70, "Infringement Claims, Licenses, and Assignments," provides private parties with a process for filing administrative claims for patent infringement against DoD Components. A civil suit for patent infringement against the United States may also be filed in the U.S. Court of Federal Claims under section 1498, title 28 United States Code (28 U.S.C. §1498 [2012]).

Personnel Properly Awarded Contract HR0011-07-C-0076

Allegation 1. DARPA personnel improperly awarded a \$1 million contract to VPI for a study program to analyze the disc-rotor.

DoD IG Response. The allegation was unsubstantiated. DARPA personnel properly awarded contract HR0011-07-C-0076, valued at \$499,972, on June 25, 2007, to perform a seedling concept study, a disc-rotor research effort, with Boeing.² DARPA personnel properly conducted the contract solicitation, contract pre-award, and contract award phases of the cost-plus-fixed-fee contract, and therefore properly awarded the contract to Boeing.

Contract Solicitation

DARPA personnel properly issued BAA 06-15, "DARPA Tactical Technology Office (TTO)," to solicit proposals for advanced R&D of system- and subsystem-level

² The Boeing Company co-performed the contract with VPI.

technologies that enable revolutionary improvements in the efficiency and effectiveness of the military on March 20, 2006. The goal of the solicitation was to fund proposals that would develop innovative ideas in the areas of aerospace systems and tactical multipliers. The BAA did not specifically refer to disc-rotor technology. The BAA 06-15 published on the Federal Business Opportunities website <https://www.fedbizopps.gov>, stated that DARPA TTO



The goal of the program was to develop innovative ideas in the areas of aerospace systems and tactical multipliers.

personnel would receive all proposals, evaluate them, select for award, and then respond to each white paper within 45 days after receipt. As soon as the evaluation of a proposal was completed, the offeror would be notified that the proposal was either selected for funding pending contract negotiations or the proposal was not selected. See Appendix D for additional information on BAA 06-15.

Contract Pre-Award – Evaluation of BAA Submittals

DARPA personnel properly followed the procedures contained in FAR Part 35, “Research and Development Contracting,” to evaluate and select awardees for BAAs to fulfill requirements for scientific reviews. All scientific reviews were based on the evaluation criteria detailed in the published BAA.

DARPA received 147 white paper topics submitted in response to BAA 06-15. DARPA personnel encouraged 25 responders to submit a proposal based on their white paper submission. DARPA contracting personnel provided letters of “Discouraged” to 122 white papers submissions based on the relevance to the TTO mission and preliminary technical assessment.³ Boeing submitted seven white papers on various topics in response to BAA 06-15. Only one of the seven white papers mentioned disc-rotor technology. DARPA contracting personnel encouraged Boeing to submit proposals for two of their seven white papers. DARPA personnel discouraged other white papers with subjects related to disc-rotor technology submitted under BAA 06-15, such as “Hybrid Helicopter-Airplane for Vertical Take-Off/Vertical Landing, Hover and High Speed Flight,” “Flight Evaluation of a High Speed Vertical Take-Off/Vertical Landing (VTOL) Concept,” and “High Speed Rotorcraft Demonstration Vehicle.”

DARPA received 72 proposals in response to BAA 06-15. DARPA personnel evaluated and assessed the proposals on the factors specified in the BAA. Evaluators determined that

³ DARPA records accounted for 147 of the 154 white paper submissions and responses to the 2006 BAA.

34 proposals would be tentatively selectable for award. DARPA contracting personnel selected 31 of the 34 proposals for contract award and 3 of the 34 proposals to receive grants or cooperative agreements. DARPA evaluators determined that 38 proposals should not receive a contract award. We identified one proposal and three white papers that discussed either helicopters or disc-rotor technology. Only the proposal was selected for contract award and was titled "Vertical Take-Off/Vertical Landing Challenge" (HR0011-06-2-0011). The complainant did not submit a white paper or a proposal in response to BAA 06-15.

Contract Awarded to Boeing

The DARPA TTO Source Selection Chairman selected Boeing for contract award to conduct a seedling concept study, a disc-rotor research effort (Phase 0), on March 30, 2007. Under this Phase 0 contract, Boeing teamed with VPI to conduct disc-rotor trade studies, design refinement, mechanical systems conceptual layout, wind tunnel testing, hover rig testing, computational fluid dynamics analysis, and risk reduction planning, to provide an initial assessment of performance and flying qualities. On June 25, 2007, DARPA contracting personnel competitively awarded contract HR0011-07-C-0076 to Boeing for \$499,972.

Personnel Properly Awarded Noncompetitive Contract HR0011-09-C-0056

Allegation 2. DARPA personnel improperly awarded a \$9 million noncompetitive contract for a disc-rotor with telescoping storing blades to Boeing.

DoD IG Response. The allegation was unsubstantiated. We determined DARPA personnel properly awarded noncompetitive contract HR0011-09-C-0056, valued at about \$7.3 million. Specifically, DARPA personnel properly justified and obtained the proper approvals before awarding the noncompetitive contract.

Noncompetitive Contract Awarded to Boeing



DARPA personnel obtained approval from the proper official for the Justification and Approval before awarding the noncompetitive contract.

DARPA personnel awarded noncompetitive contract HR0011-09-C-0056 to Boeing for about \$7.3 million for the continuation of the seedling concept study, a disc-rotor research effort (Phase 0), on January 30, 2009. The effort was a logical follow-on to the earlier effort conducted by Boeing and VPI, which followed Boeing's earlier Canard Rotor Wing program.

DARPA contracting personnel properly justified the noncompetitive contract award to Boeing. DARPA contracting personnel complied with requirements stated in FAR Subpart 6.3, "Other Than Full and Open Competition." Specifically, DARPA personnel referenced the specific authority under which the contract was awarded, complied with content requirements, and obtained approval from the proper official for the Justification and Approval (J&A) before awarding the noncompetitive contract. In addition, DARPA contracting personnel had adequate documentation that justified the noncompetitive award of contract HR0011-09-C-0056 to meet the Government's needs.

Appropriately Applied the Other than Full and Open Competition Authority Cited

DARPA personnel appropriately applied the cited authority permitting other than full and open competition in the J&A reviewed. DARPA personnel cited in the J&A the authority of FAR 6.302-1, "Only One Responsible Source and No Other Supplies or Services Will Satisfy Agency Requirements." Additionally, DARPA personnel provided adequate rationale in the J&A as to why only one contractor could provide the required product or service and why only that product or service could meet the Government's requirements.

FAR 6.302-1(b) states the authority may be appropriate when unique supplies or services are available from only one source or one supplier with unique capabilities. DARPA contracting personnel explained in the J&A that the contractor is the developer of an analytical, broadly substantiated disc-rotor concept and uniquely able to conduct the detailed Phase I research and concept validation effort for the following reasons.

- It possesses unique disc-rotor technical knowledge developed under the Phase 0 seedling program that is required to continue the validation effort under Phase I.
- It possesses a comprehensive understanding of hybrid rotorcraft technical efforts, most importantly from the Canard Rotary Wing effort, where it is the singular owner of development lessons learned that will strongly influence the disc-rotor technical approach.
- It has understanding and access to capabilities, facilities, and proprietary intellectual/data necessary to successfully conduct the Phase I investigation.
- The focus of the Phase I research is to develop a definitive understanding of the disc-rotor concept feasibility, and to further refine and develop the conceptual design. The intellectual property developed by Boeing's earlier studies is a

stepping-off point, without which an organization other than Boeing is not equipped to perform the proposed research effort.

- To date, Boeing is the only organization to have submitted a compliant proposal in response to an open DARPA BAA for research of this particular concept.

Complied with Content and Other Federal Acquisition Regulation Requirements

DARPA personnel documented all the FAR 6.303-2, "Content," J&A content requirements and provided enough information in the J&A to justify permitting other than full and open competition in the award of contract HR0011-09-C-0056. Additionally, DARPA personnel:

- obtained approval from the proper personnel for noncompetitive contract award;
- adequately justified and supported other than full and open competition determination;
- met J&A market research content requirements; and
- complied with the FAR Part 5, "Publicizing Contract Action," requirement when posting synopsis and award notice on the Federal Business Opportunity website on September 4, 2008, and February 3, 2009, respectively.

Personnel Properly Considered Disc-Rotor Submissions

Allegation 3. DARPA personnel improperly denied about 10 of the complainant's submittals to BAAs during the period 1993 through 2009.

DoD IG Response. The allegation was unsubstantiated. We determined that DARPA followed proper procedures in addressing the complainant's white paper topic submissions, proposals, and letters.

Proper Review and Responses to White Papers and Proposals

DARPA personnel provided documentation that the complainant submitted a total of four white papers and two proposals between the period of August 2002 and August 2009. DARPA personnel properly considered the complainant's submissions of white papers and proposals to its BAAs. DARPA personnel responded to three of four white papers and both of the proposals the complainant submitted for disc-rotor technology R&D.

- August 2002: The complainant submitted a full proposal titled, “Modus Verticraft UAV Jet Defender,” in response to BAA 01-45. DARPA personnel completed two evaluations and replied to the complainant notifying his proposal was not selected for award.
- July 2004: The complainant submitted a white paper titled, “Modus Rotorfan™ Subsonic vs. Transonic Lift Performance” in response to BAA 04-04. DARPA personnel sent a “Discourage” letter to the complainant in response to his Subsonic vs. Transonic Lift Performance white paper.⁴
- March 2007: The complainant submitted another white paper titled “Modus Aircraft” in response to BAA 07-20. DARPA personnel evaluated the white paper as non-selectable and subsequently replied with a “Discourage” letter to the complainant stating, “the results of the evaluation indicate that if you were to submit a proposal based upon this white paper, a contract award would be unlikely; however, you are not precluded from submitting a full proposal.”
- June 2008: The complainant submitted a fourth white paper titled, “Modus Aircraft” in response to BAA 08-31. DARPA personnel evaluated the white paper and replied on September 5, 2008, encouraging the complainant to submit a full proposal.
- August 2009: The complainant submitted a full proposal in response to DARPA’s recommendation to his June 11, 2008 white paper submission. DARPA personnel evaluated the proposal against the BAA evaluation criteria and rated the proposal “not selectable.” DARPA personnel replied to the complainant that the proposal was not selected for award. Following the notification of non-selection, the complainant addressed two letters to the Director of DARPA asking for reconsideration of his disc-rotor submittals. DARPA personnel replied that the complainant could submit proposals to existing and future BAAs for consideration.

Based on the four white paper submissions and two proposals, along with correspondence between the complainant and DARPA personnel, we determined that DARPA personnel properly reviewed and followed procedures in addressing the complainant’s white paper topic submissions, proposals, and letters.

⁴ The complainant submitted another white paper titled, “Modus Rotorfan™” to which DARPA personnel did not respond with a “Discourage” letter or a letter encouraging the complainant to submit a full proposal.”

Alleged Patent Infringement

Allegation 4. DARPA personnel improperly awarded contracts that infringed on the complainant's patents for disc-rotor blade technology.

DoD IG Response. We did not make a determination on this allegation.

DARPA contracting personnel included within both HR0011-07-C-0076 and HR0011-09-C-0056 contracts a FAR 52.227-1 "Authorization and Consent," clause in which the Government authorizes a contractor to use or manufacture an invention covered by a U.S. patent. DARPA contracting personnel also included in both contracts a FAR 52.227-2, "Notice and Assistance Regarding Patent and Copyright Infringement," clause in which the Government requires notice and assistance from its contractors regarding any claims for patent or copyright infringement. In addition, 28 U.S.C. §1498 [2012] permits patentees to recover "reasonable and entire" compensation from the United States for its or its contractors unlicensed use or manufacture of patented inventions. Specifically, 28 U.S.C. §1498 (2012) states:

Whenever an invention described in and covered by a patent of the United States is used or manufactured by or for the United States without license of the owner thereof or lawful right to use or manufacture the same, the owner's remedy shall be by action against the United States in the United States Court of Federal Claims for the recovery of his reasonable and entire compensation for such use and manufacture.

DFARS subpart 227.70 provides private parties with a process for filing administrative claims for patent infringement against DoD Components. The DARPA General Counsel stated in a December 2012 e-mail that to his knowledge, the complainant had not communicated any allegations of patent infringement to DARPA and that DARPA had not received relevant notices of patent infringement from Boeing or from its subcontractors.

Summary

DARPA personnel properly awarded contracts HR0011-07-C-0076 and HR0011-09-C-0056. Specifically, DARPA personnel properly conducted the contract solicitation, contract pre-award, and contract award phases to satisfy cost-plus-fixed-fee contract requirements, and therefore properly awarded contract HR0011-07-C-0076 to Boeing. In addition, DARPA personnel adequately justified the use of other than full and open competition on the J&A for contract HR0011-09-C-0056. DARPA contracting personnel complied with FAR 6.303-2 content requirements in the J&A and appropriately applied the authority cited and obtained approval from the proper personnel before

contract award. Further, DARPA contracting personnel documented compliance with FAR Part 5. DARPA followed established procedures in addressing the complainant's white paper topic submissions, proposals, and letters. Lastly, both DFARS subpart 227.70 and 28 U.S.C. §1498 provide affected parties with the possibility of administrative and/or judicial relief, respectively, for possible patent infringement. According to DARPA, the complainant had not communicated any allegations of patent infringement to DARPA, nor had DARPA received any notices of patent infringement from Boeing or its subcontractors.

Appendix A

Scope and Methodology

We conducted this performance audit from November 2012 through July 2013 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 conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

We performed the audit in response to a congressional request from Senator Sherrod Brown and a constituent's allegations relating to contracts improperly awarded for disc-rotor technology research and development. As a result, we reviewed contracts HR0011-07-C-0076 and HR0011-09-C-0056 and DARPA contract procedures.

Our audit included three major areas of review. Our review concentrated on the solicitation, pre-award, and award of contracts HR0011-07-C-0076 and HR0011-09-C-0056. Initial audit work was performed at DARPA headquarters, Arlington, Virginia. We reviewed documentation maintained by the contracting personnel to support Broad Agency Announcement (BAA) 06-15. The documents reviewed included the BAAs, basic contracts, initial proposals, white papers, justification and approval, Federal Business Opportunities solicitation and award notices, technical evaluations, and other contract documentation relating to the BAA and the contract awards. Much of the information was obtained from copies of the contracting file DARPA personnel provided. We reviewed only the allegations on the award of contracts HR0011-07-C-0076 and HR0011-09-C-0056 for disc-rotor technology research and development in the congressional request.

We reviewed program and contract documentation, and interviewed program and contracting personnel responsible for contract solicitations, source selections, and contract awards.

We reviewed two DARPA contract files, HR0011-07-C-0076 and HR0011-09-0056, to determine whether contracting personnel:

- Complied with Federal Acquisition Regulation (FAR) Part 35 and DARPA Instruction No. 13 for soliciting, evaluating, and selecting proposals;
- Complied with FAR Part 5, for publicizing contract actions;

- Complied with FAR Part 6.3, for other than full and open competition; and
- Included clauses FAR 52.227-1 and FAR 52.227-2 in the use or manufacture of an invention covered by U.S. patents, data, and copyrights.

For contracts HR0011-07-C-0076 and HR0011-09-0056, awarded to Boeing, we reviewed DARPA solicitation and source selection practices as well as DARPA or DARPA-designated contract award practices. To determine the adequacy of DARPA's solicitation process, we reviewed BAA 06-15 to determine whether the solicitation was posted on the Federal Business Opportunities website, <https://www.fedbizopps.gov>, applicable evaluation criteria was included in the solicitation, and contractors were provided sufficient time to submit proposals in response to the solicitation. We evaluated DARPA's source selection procedures and reviewed DARPA guidance to determine whether source selection personnel evaluated proposals based on published criteria, and adequately documented the basis for each source selection decision. We determined whether DARPA properly used noncompetitive procedures for one contract action, and we reviewed the justification and approval for other than full and open competition for compliance with FAR policies and procedures. We determined whether DARPA personnel properly awarded contracts to Boeing for disc-rotor blade technology. We did not make a determination on whether DARPA personnel improperly awarded contracts to Boeing that infringed on the complainant's patents for disc-rotor blade technology. Defense Federal Acquisition Regulation Supplement (DFARS) subpart 227.70 provides private parties with a process for filing administrative claims for patent infringement against DoD Components. A civil suit for patent infringement against the United States may also be filed in the U.S. Court of Federal Claims under section 1498, title 28 United States Code [28 U.S. C. 1498[2012].

Use of Computer-Processed Data

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

Use of Technical Assistance

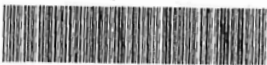
We consulted with the Office of the Inspector General, Office of General Counsel to identify applicable patent infringement laws and regulations and the interpretation of the patent infringement laws and regulations.

Prior Coverage

No prior coverage has been conducted on the DARPA awarding contracts to Boeing for disc-rotor technology research and development during the last 5 years.

Appendix B

Congressional Request

SHERROD BROWN OHIO COMMITTEES: AGRICULTURE, NUTRITION, AND FORESTRY APPROPRIATIONS BANKING, HOUSING, AND URBAN AFFAIRS VETERANS' AFFAIRS SELECT COMMITTEE ON ETHICS	United States Senate WASHINGTON, DC 20510
May 8, 2012	
Ms. Elizabeth King Assistant Secretary of Defense for Legislative Affairs U.S. Department of Defense 1300 Defense Pentagon Washington, District of Columbia 20301-1300	
Dear Ms. King:	
Enclosed please find correspondence from my constituent, [REDACTED]	
[REDACTED] has asked my office to forward the enclosed complaint about the Defense Advanced Research Projects Agency (DARPA) to Acting Inspector General Lynne M. Halbrooks. The purpose of this letter is to request your office to take this action on my constituent's behalf.	
Thank you for your attention to this important matter.	
Sincerely,  Sherrod Brown United States Senator	
SB:lrp Enclosures cc: [REDACTED] Enclosures	
 OSD005695-12	
PRINTED ON RECYCLED PAPER	

Appendix C

Federal Acquisition Regulation Criteria

Federal Acquisition Regulation Subpart 5.2, “Synopses of Proposed Contract Actions”

Federal Acquisition Regulation (FAR) 5.201, “General,” requires agencies to provide a synopsis of proposed contract actions for the acquisition of supplies and services. The contracting officer must submit the synopsis to the Government point of entry that can be accessed at <https://www.fedbizopps.gov>. FAR 5.202, “Exceptions,” lists circumstances when the contracting officer does not need to submit a synopsis, such as when a contract action cites an unusual and compelling urgency as the exception to full and open competition. In addition, FAR 5.203, “Publicizing and Response Time,” requires at least a 45-day response time for receipt of bids or proposals from the date of publication of the notice required for proposed contract actions categorized as research and development if the proposed contract action is expected to exceed the simplified acquisition threshold. However, the contracting officer may establish a shorter period of issuance for commercial items. FAR 5.207, “Preparation and Transmittal of Synopses,” requires each synopsis submitted to the Government point of entry to include certain data elements as applicable, such as the date of the synopsis, the closing response date, a proposed solicitation number, a description, and the point of contact or contracting officer.

Federal Acquisition Regulation Subpart 5.3, “Synopses of Contract Awards”

FAR 5.301, “General,” requires contracting officers to synopsize through the Government point of entry any contract awards exceeding \$25,000 that are covered by the World Trade Organization Government Procurement Agreement or a Free Trade Agreement; or likely to result in the award of any subcontracts. However, the dollar threshold is not a prohibition against publicizing an award of a smaller amount when publicizing would be advantageous to industry or to the Government. According to FAR 5.303, “Announcement of Contracts Awards,” contracting officers shall make information available on awards over \$4 million (unless another dollar amount is specified in agency acquisition regulations) in sufficient time for the agency concerned to announce it by 5 p.m. Washington, District of Columbia, time on the day of award. Agencies shall not release information on awards before the public release time of 5 p.m. Washington, District of Columbia time.

Federal Acquisition Regulation Subpart 6.3, “Other Than Full and Open Competition”

FAR subpart 6.3 prescribes the policies and procedures for contracting without full and open competition. Contracting without full and open competition is a violation of statute, unless permitted by an exception listed in FAR 6.302, “Circumstances Permitting Other Than Full and Open Competition.” FAR 6.302 presents seven exceptions for contracting without full and open completion.

- FAR 6.302-1, “Only One Responsible Source and No Other Supplies or Services Will Satisfy Agency Requirements;”
- FAR 6.302-2, “Unusual and Compelling Urgency;”
- FAR 6.302-3, “Industrial Mobilization; Engineering, Development, or Research Capability; or Expert Services;”
- FAR 6.302-4, “International Agreement;”
- FAR 6.302-5, “Authorization or Required by Statute;”
- FAR 6.302-6, “National Security;” and
- FAR 6.302-7, “Public Interest.”

A contracting officer must not begin negotiations for or award a noncompetitive contract without providing full and open competition unless the contracting officer justifies the use of such action in writing, certifies the accuracy and completeness of the justification, and obtains approval of the justification. FAR 6.303-2, “Content,” requires each justification to contain sufficient facts and rationale to justify the use of the authority cited. At a minimum, each justification must contain:

- the name of the agency and contracting activity and identification of the document as a “Justification for other than full and open competition;”
- a description of the action being approved;
- a description of the supplies or services required to meet the agency’s needs, including the estimated value;
- the statutory authority permitting other than full and open competition;
- a demonstration that the contractor’s unique qualifications or the nature of the acquisition requires the use of the authority cited;

- a description of the efforts made to ensure offers are submitted from as many sources as practicable, including whether a notice was or will be publicized;
- the contracting officer's determination that the cost to the Government will be fair and reasonable;
- a description and the results of the market research conducted or, if market research was not conducted, a reason it was not conducted;
- any other facts supporting the use of other than full and open competition;
- a listing of sources that expressed written interest in the acquisition;
- a statement of the actions the agency may take to overcome any barriers to competition before a subsequent acquisition; and
- the contracting officer's certification that the justification is accurate and complete to the best of their knowledge and belief.

FAR 6.304, "Approval of the Justification," identifies the person responsible for approving the Justification and Approval (J&A) based on the value of the proposed contract. The thresholds discussed are the thresholds that were in place during the scope of the audit. The contracting officer approves the J&A for a proposed contract not exceeding \$550,000. The competition advocate approves the J&A for a proposed contract of more than \$550,000 but not exceeding \$11.5 million. A general or flag officer, if a member of the military, or civilian in a position above GS-15 under the general schedule, approves the J&A for a proposed contract of more than \$11.5 million but not exceeding \$78.5 million. The senior procurement executive of the agency approves the J&A for a proposed contract of more than \$78.5 million.

Federal Acquisition Regulation Part 10, "Market Research"

FAR part 10 prescribes policies and procedures for conducting market research to arrive at the most suitable approach for acquiring, distributing, and supporting supplies and services. Agencies are required to conduct market research appropriate to the circumstances before soliciting offers for acquisitions with an estimated value over the simplified acquisition threshold. Agencies are required to use the results of market research to determine if there are appropriate sources or commercial items capable of satisfying the agency's requirements. The extent of market research the agencies conduct varies, depending on factors such as urgency, estimated dollar value, complexity, and past experience. Agencies use market research techniques, such as contacting knowledgeable individuals in Government and industry, reviewing results of recent market research,

publishing formal request for information, querying databases, participating in online communication, obtaining source lists of similar items, and reviewing available product literature. Agencies should document the results of market research in a manner appropriate to size and complexity of the acquisition.

Federal Acquisition Regulation Subpart 15.3, “Source Selection”

FAR subpart 15.3, “Source Selection,” states that the award decision is based on evaluation factors and significant subfactors that are tailored to the acquisition. The evaluation factors and significant subfactors that apply to an acquisition and their relative importance are within the broad discretion of agency acquisition personnel, subject to the following requirements.

- Price or cost to the Government shall be evaluated in every source selection.
- The quality of the product or service shall be address in every source selection through consideration of one or more non-cost evaluation factors, such as past performance, compliance with solicitation requirements, technical excellence, management capability, personnel qualification, and prior experience.
- Except when not appropriate, past performance shall be evaluated in all source selections for negotiated competitive acquisitions expected to exceed the simplified acquisition threshold.

FAR Subpart 15.304(d) states that while the rating method need not be disclosed, all factors and significant subfactors that will affect contract award and their relative importance should be stated clearly in the solicitation. The general approach for evaluation past performance information should be described. In addition, the solicitation should also state, at a minimum, whether all evaluation factors other than cost or price, when combined, are significantly more important, approximately equal to, or significantly less important than cost or price.

Appendix D

Broad Agency Announcement 06-15

Defense Advanced Research Projects Agency (DARPA) Tactical Technology Office (TTO) personnel issued Broad Agency Announcement (BAA) 06-15 to solicit proposals for advanced research and development of system- and subsystem-level technologies that enable revolutionary improvements in the efficiency and effectiveness of the military on March 20, 2006. The goal of the program was to develop novel ideas in the areas of aerospace systems and tactical multipliers. DARPA personnel would consider a broad range of technologies but would focus on the high-risk/high-payoff development and demonstration of complete systems or subsystems rather than advances in basic sciences. DARPA personnel also encouraged offerors to look at www.darpa.mil for their current activities. DARPA personnel anticipated multiple awards from FY 2006 funds and stated awards under this BAA would be made to offerors on the basis of the evaluation criteria and program balance to provide best value to the Government.

Acronyms and Abbreviations

BAA	Broad Agency Announcement
DARPA	Defense Advanced Research Projects Agency
DFARS	Defense Federal Acquisition Regulation Supplement
FAR	Federal Acquisition Regulation
IG	Inspector General
J&A	Justification and Approval
R&D	Research and Development
TTO	Tactical Technology Office
VPI	Virginia Polytechnic Institute and State University
VTOL	Vertical Take-Off/Vertical Landing



Whistleblower Protection

U.S. DEPARTMENT OF DEFENSE

The Whistleblower Protection Enhancement Act of 2012 requires the Inspector General to designate a Whistleblower Protection Ombudsman to educate agency employees about prohibitions on retaliation, and rights and remedies against retaliation for protected disclosures. The designated ombudsman is the DoD IG Director for Whistleblowing & Transparency. For more information on your rights and remedies against retaliation, go to the Whistleblower webpage at www.dodig.mil/programs/whistleblower.

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