
April 14, 2004



Acquisition

The NATO AWACS Mid-Term
Modernization Program "Global
Solution"
(D-2004-069)

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Acronyms

AEW&C	Airborne Early Warning and Control
AWACS	Airborne Warning and Control System
CJCSI	Chairman of the Joint Chiefs of Staff Instruction
DCAA	Defense Contract Audit Agency
DCMA	Defense Contract Management Agency
EMD	Engineering and Manufacturing Development
ESC	U.S. Air Force Electronic Systems Center
FAR	Federal Acquisition Regulation
MMOU	Multilateral Memorandum of Understanding
NAPMA	NATO AEW&C Programme Management Agency
NAPMO	NATO Airborne Early Warning and Control Program Management Organization
NATO	North Atlantic Treaty Organization
NMT	NATO E-3 Mid-Term Modernization
ORD	Operational Requirements Document



INSPECTOR GENERAL
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April 14, 2004

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

SUBJECT: Report on The NATO AWACS Mid-Term Modernization Program
"Global Solution" (Report No. D-2004-069)

We are providing this report for review and comment. We performed this audit in response to a request from the Secretary of the Air Force made through the Deputy Assistant Secretary of the Air Force for Contracting. This report does not address matters under investigation by other components of the Office of the Inspector General. We considered management comments from the Deputy Assistant Secretary of the Air Force for Contracting when preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. We request that the Deputy Assistant Secretary of the Air Force for Contracting and the Commander of the Electronic Systems Center, reconsider their position on Recommendation 2.c. and provide comments on the final report by May 28, 2004.

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. Timothy E. Moore at (703) 604-9282 (DSN 664-9282) or Mr. Terry L. McKinney at (703) 604-9288 (DSN 664-9288). See Appendix E for the report distribution. The team members are listed on the back cover.

By direction of the Deputy Inspector General for Auditing:

David K. Steensma

David K. Steensma

Director

Contract Management Directorate

Office of the Inspector General of the Department of Defense

Report No. D-2004-069
(Project No. D2004CF-0068)

April 14, 2004

The NATO AWACS Mid-Term Modernization Program “Global Solution”

Executive Summary

Who Should Read This Report and Why? DoD Senior Acquisition Executives, North Atlantic Treaty Organization (NATO) officials, contracting officials, attorneys, program managers, and military personnel involved in negotiating, awarding, and administering contracts should read this report. This report discusses the analyses required to determine a fair and reasonable price for the award of a contract modification to the Boeing Company by the U.S. Air Force Electronics Systems Center on behalf of the NATO Airborne Early Warning and Control Program Management Organization. Contributing to the importance to analyze the Boeing price was the fact that the negotiator, on behalf of the U.S. Government, was the former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management, who later went to work for Boeing. This report also identifies problems on determining a fair and reasonable price similar to those described in our report on the “Acquisition of the Boeing KC-767A Tanker Aircraft,” March 29, 2004.

Background. On December 18, 2003, the Secretary of the Air Force, through the Deputy Assistant Secretary of the Air Force for Contracting, requested that we review the negotiations of a contract modification which occurred in calendar year 2002 to restructure the NATO Airborne Warning and Control System (AWACS) Mid-Term Modernization Program that became known as the “Global Solution.” The focus of the review was to determine whether correct business and contracting procedures were followed. Since the former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management who was also the Chairman of the NATO Airborne Early Warning and Control Program Management Organization Board of Directors conducted the negotiations, the Secretary of the Air Force was also concerned that the negotiations were properly conducted.

The E-3 AWACS represents the standard for the world for the airborne early warning systems. Equipped with a “look-down” radar, the AWACS can separate airborne targets from the ground and sea clutter returns that confuse other present-day radars. The NATO AWACS surveillance system is integrated into 18 commercial Boeing 707-320B aircraft, modified to accommodate the mission equipment and crew of 17.

The NATO AWACS Mid-Term Modernization Program consists of a set of improvements to expand the performance and flexibility of the existing NATO fleet of 18 aircraft. The U.S. Air Force Electronics Systems Center, acting as a procurement agent for the NATO Airborne Early Warning and Control Program Management Organization, awarded Boeing a contract for the engineering and manufacturing

*This report does not address matters under investigation by other Components of the Office of the Inspector General.

development phase of this program. Boeing encountered performance problems on the contract and a contract modification was developed to resolve those problems. The “Global Solution,” restructured the initial contract and addressed the performance problems, thereby reducing program risk for developing the enhancements to the NATO AWACS. The Global Solution modification, which increased the contract amount from \$551.3 million to \$1.34 billion, included future options for production and retrofit. The \$1.34 billion also included \$.02 billion for added follow-on spare parts and costs for other unresolved contract issues that were not included in the contract negotiations.

Results. Senior level managers did not use appropriate business and contracting procedures as specified in the Federal Acquisition Regulation when they negotiated the Global Solution in September 2002. When the senior level managers were determining whether the \$1.32 billion negotiated price was fair and reasonable, they did not use a Government cost estimate, an integrated product team to analyze the proposed statement of work, a technical evaluation of labor hours and labor mixes, audit assistance to review direct and indirect rates, and weighted guidelines to establish reasonable profit and share ratios. Air Force contracting officials awarded the Global Solution contract modification in December 2002 without knowing whether the \$1.32 billion cost was fair and reasonable.

The U.S. representative to the NATO Airborne Early Warning and Control Program Management Organization Board of Directors needs to ensure that options (production and retrofit) included as part of the contract modification are not approved until thorough analyses of Boeing technical and cost proposals are completed. The Commander, Air Force Electronic Systems Center, should not award contract line item options contained in the NATO AWACS Mid-Term Modernization Program Global Solution contract until the final negotiated price is determined to be fair and reasonable. In addition, the Commander should ensure that the contracting officer negotiates a fully documented and justifiable fair and reasonable price for the production and retrofit phase of the NATO AWACS Mid-Term Modernization Program. (See the Finding section of the report for the detailed recommendations.)

Management Comments and Audit Response. The Deputy Assistant Secretary of the Air Force for Contracting and the Commander, Electronic Systems Center, concurred that the Global Solution price was determined without first completing an independent cost estimate, an integrated product team analysis, a technical evaluation of hours and labor mixes, audit assistance, and weighted guidelines to establish a negotiation objective for profit. The Deputy Assistant Secretary and the Commander concurred with the intent of all recommendations and stated that the technical and cost analyses would be completed, but the Air Force needs to award production and retrofit options as an undefinitized contract action so that the NATO E-3 Mid-Term Modernization Program can proceed while the Electronic Systems Center and the NATO Airborne Early Warning and Control Programme Management Agency (NAPMO) conduct technical and cost analyses. An expert team would not be used to do a technical review of Boeing’s proposed solution unless changes are made to the statement of work. The Deputy Assistant Secretary stated that using an undefinitized contract action provided the most benefit to the NAPMO nations because production and retrofit program content and schedule would remain the same as under the Global Solution and would not be negotiated further and prices could only be equal to or less than the prices the NAPMO nations had previously determined to be acceptable.

The Air Force comments are responsive to the intent of the recommendations. The Air Force decision to use an undefinitized contract action as a bridging action does not lessen the responsibility of the Air Force Electronic System Center to obtain and document a fair and reasonable price for the NATO AWACS production and retrofit tasks. We do not agree that a technical review of Boeing's proposed solution should be limited to changes made to the scope of work. We request that by May 28, 2004, the Commander, Electronic Systems Center reconsider his position on the use of an expert team to evaluate Boeing's technical solution and submit additional comments. See the Finding section of this report for a discussion of management comments and the Management Comments section of this report for the complete text of the comments.

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Background

The audit was performed at the request of the Secretary of the Air Force made through the Deputy Assistant Secretary of the Air Force for Contracting. On December 18, 2003, the Secretary of the Air Force requested that we review the negotiation of the contract restructure to the NATO AWACS Mid-Term Modernization Program that became known as the “Global Solution.”

The North Atlantic Treaty Organization (NATO) E-3 Airborne Warning and Control System (AWACS). The NATO E-3 cooperative program consists of AWACS aircraft that represent the standard for the world for airborne early warning systems. Equipped with a “look-down” radar, the AWACS can separate airborne targets from the ground and sea clutter returns that confuse other present-day radars. In 1978, the Boeing Company (Boeing), as prime contractor, teamed with subcontractors in the Federal Republic of Germany, Canada, and the United States to provide the NATO alliance with 18 E-3 systems. The NATO E-3 aircraft was built based on the earlier developed and deployed U.S. Air Force E-3 aircraft. The NATO AWACS surveillance system is integrated into a commercial Boeing 707-320B aircraft, modified to accommodate the mission equipment and a crew of 17. The modified Boeing 707-320B is distinguished by the addition of a large, rotating rotodome that contains the aircraft radar antenna. The NATO Airborne Early Warning and Control (AEW&C) Program Management Organization (NAPMO) who normally meets in Brunssum, the Netherlands, was established to manage the acquisition of the 18 aircraft and supporting equipment and trainers.

NAPMO is headed by a board of directors with representatives from the 13 countries (Belgium, Canada, Denmark, Germany, Greece, Italy, Luxembourg, the Netherlands, Norway, Portugal, Spain, Turkey, and the United States) that participate in the NATO AWACS program. The current Chairman of the Board is the U.S. Air Force Program Executive Officer for Services. There is also a U.S. representative on the board, the Deputy Assistant Secretary of the Air Force for Contracting. The former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management was the Chairman of the Board for NAPMO from 1994 through 2002.

The NATO E-3 Mid-Term Modernization (NMT) Program. The NMT program consists of a set of improvements to expand the performance and flexibility of the existing NATO E-3 fleet. According to the “Acquisition Agreement between the United States Government and NAPMO for Acquisition of the NATO E-3 Aircraft, Engines and Related Articles, and Services,” January 17, 2001, (the Acquisition Agreement) the U.S. Air Force acts as a procurement agent for NAPMO and is responsible for procuring NMT program upgrades. As the U.S. representative on the NAPMO Board of Directors and as a procurement agent, the Deputy Assistant Secretary of the Air Force for Contracting has a responsibility to ensure that NATO is treated fairly. Additionally, NAPMO has a Board of Directors and is supported by the NATO AEW&C Programme Management Agency (NAPMA), also headquartered in Brunssum, the Netherlands. NAPMO has delegated the authority to the NAPMA general manager to plan, coordinate, contract, administer, and expend funds.

Contract F19628-97-C-0112. In November 1997, the U.S. Air Force Electronics Systems Center (ESC), acting as an agent for NAPMO, awarded Contract F19628-97-C-0112 to Boeing for the engineering and manufacturing development (EMD) phase of the NMT program. Boeing, supported by contractors from participating NATO nations, was contracted to integrate major system-related enhancements to computers, displays, communications, navigation and target identification. ESC established contract F19628-97-C-0112 as a fixed-price incentive-firm target effort with a ceiling price of \$452 million and expected Boeing to complete the effort within 46 months. The contract was a result of a negotiated procurement accomplished under Federal Acquisition Regulation (FAR) Part 15. The contract was a direct commercial sale from Boeing to NATO in accordance with section 38 of the Arms Export Control Act (22 U.S.C. 2778), not a foreign military sale by the U.S. Government. As an agent for NAPMO, ESC operated under guidance provided by the Arms Export Control Act and under the authority of the “Multilateral Memorandum of Understanding (MMOU) among NATO Ministers of Defense on the NATO E-3 Cooperative Programme (the MMOU),” December 6, 1978, the NAPMO charter, and the Acquisition Agreement.

Contract Pricing. FAR Subpart 15.4, “Contract Pricing,” prescribes price negotiation policies and procedures for prime contracts and contract modifications. FAR 15.402 states that contracting officers must purchase supplies and services from responsible sources at fair and reasonable prices. The contracting officer is responsible for the determination of price reasonableness for the prime contract, including subcontracting costs. FAR 15.402 also states that contracting officers must price each contract separately and independently and not consider losses or profits realized or anticipated under other contracts.

Cost or Pricing Data. FAR 15.403 states that contracting officers will obtain certified cost or pricing data for all contract actions valued over \$550,000 except when:

- the price is based on adequate price competition,
- the prices are set by law or regulation,
- a commercial item is being acquired,
- a waiver has been granted, or
- the contracts or subcontracts for commercial items have been modified.

FAR 15.403 also states that unless an exception applies, certified cost or pricing data are required before awarding negotiated contracts and subcontracts. FAR 15.404 states that contracting officers shall use cost analysis to evaluate the reasonableness of individual cost elements when cost or pricing data are required and use price analysis to verify that the overall price offered is fair and reasonable. FAR 15.406 states that when cost or pricing data are required, the contracting officer must require the contractor to execute a Certificate of Current Cost or Pricing Data.

Technical Analysis. FAR 15.404 states that the contracting officer may request that personnel having specialized knowledge, skills, experience, or capability in engineering, science, or management perform a technical analysis of the proposed types and quantities of materials, labor, processes, special tooling, facilities, and other associated factors set forth in proposals to determine the need for and reasonableness of the proposed resources, assuming reasonable economy and efficiency. In our opinion, for a complex program such as the NATO AWACS program, the technical analysis should, at a minimum, examine the types and quantities of material proposed and the need for the types and quantities of labor hours and the labor mix.

Audit Assistance. FAR 15.404 states that the contracting officer should request audit assistance when the information available is inadequate to determine a fair and reasonable price.

Profit. The Defense Federal Acquisition Regulation Supplement 215.404-4, "Profit," states that contracting officers must use the weighted guidelines method for developing a prenegotiation profit or fee objective on any negotiated contract action when cost or pricing data is obtained. The Defense Federal Acquisition Regulation Supplement 215.406-3, "Documenting the Negotiation," states that the contracting officer must document significant deviations from the prenegotiation profit objective and include the Record of Weighted Guidelines Application form with supporting rationale. The documentation must address the rationale for not using the weighted guidelines method when its use would otherwise be required.

Objective

Our overall audit objective was to determine whether correct business and contracting processes were used in the negotiations and award of the NATO AWACS Program "Global Solution." See Appendix A for a discussion of the scope and methodology.

Negotiation of the “Global Solution” Contract Modification

The senior level managers¹ that conducted the negotiations of the Global Solution modification did not use correct business and contracting practices as specified in the Federal Acquisition Regulation to arrive at a negotiated amount. Specifically, the managers did not perform analyses of production and retrofit tasks to determine whether the \$1.32 billion negotiated price was fair and reasonable. The former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management (who, at the time, was also the Chairman of the NAPMO Board of Directors) and the NAPMA General Manager conducted negotiations with the Chief Executive Officer of Boeing Integrated Defense Systems and determined a price without the benefit of:

- an independent Government cost estimate;
- an analysis of the contractor’s proposed solution to meet the Government requirements;
- a technical evaluation to determine whether prime and sub-contractor hours and labor mixes were reasonable;
- audit assistance to review prime and sub-contractor proposed direct and indirect rates; and
- calculation of weighted guidelines, used to determine reasonable profit and share ratios.

As a result, Air Force officials awarded the contract modification without knowing whether Boeing had proposed an efficient, technically capable or economically responsible solution. The U.S. Government should not approve the award of the contract modification options for production and retrofit items until the above stated items are completed.

Global Solution Contract Modification

The Global Solution, worth \$1.32 billion (not to be less or greater than), is for the completion of the entire NATO Mid-Term Modernization Program according to a document entitled, “Guidance to the Government/Boeing Team for the Development of a NATO Mid-Term Win/Win Global Solution Agreement,” dated September 26, 2002. However, contract modification P00068, which represents the Global Solution, totals \$1.34 billion because it includes \$.02 billion for added follow-on spares and other unresolved contract issues that were not included in the contract

¹Of the three senior level managers, the U.S. Government representative was the former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management who negotiated the contract in place of the contracting officer through the authority delegated by Assistant Secretary of the Air Force (Acquisition) Memorandum, “Delegation of Contract and Agreement Authority,” November 30, 1999.

negotiations. Contract modification P00068 increases the former amount on the contract, \$551.3 million, by \$277.8 million, adds long-lead items worth \$42.2 million, and contains production and retrofit options worth \$472.9 million, for a revised total contract value of \$1.34 billion.

The NAPMO Board of Directors² and the contracting officer have approved contract modification P00068. The NAPMO Board of Directors, with the exception of the U.S. representative, has approved the production and retrofit option portion of the contract modification. The U.S. representative has stated that he will not approve the production and retrofit option until he evaluates the results of this audit. The option for production and retrofit requires unanimous NAPMO Board of Directors approval.

To negotiate a “Global Solution” to the problems encountered by Boeing in the performance of the EMD contract, the former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management, who was also the Chairman of the NAPMO Board of Directors, along with the NAPMA General Manager, a general in the German Air Force and the Chief Executive Officer of Boeing Integrated Defense Systems held monthly senior level management meetings from November 13, 2001, through November 13, 2002. The meetings began because Boeing had advised the Air Force that performance on the EMD contract signed in November 1997 was behind schedule and that the estimate of cost at completion of the contract had grown significantly. By May 2001 Boeing projected a \$123 million financial loss on the contract. The EMD schedule was suffering serious delays because of the complexity of the effort, diminishing manufacturing sources, and other technical issues.

The Global Solution contract modification that was subsequently negotiated resulted in a program with less risk for NATO than the original contract to develop and test enhancements to NATO AWACS aircraft and avoided litigation to adjudicate an equitable price adjustment request proposed by Boeing. The negotiation of the Global Solution contract modification focused mainly on two cost areas: the increase in the ceiling price of EMD, valued at \$100 million, and priced options for NMT production and retrofit, valued at \$472.9 million. The \$472.9 million consists of \$449.5 million for the NMT program and \$23.4 million for diminished manufacturing sources options. Consequently, the contracting officer developed two price negotiation memorandums, one for the increase in ceiling price of EMD and one for the priced options for NMT production and retrofit. The following table identifies the four major cost areas of the global solution contract modification and associated values.

² The NAPMO Board of Directors consists of representatives from the 13 NAPMO member nations that participate in the NATO AWACS program.

Major Areas Comprising Global Solution

Major Cost Areas	Value (in Millions)
Amount On Contract Before Global Solution Modification	\$ 551.3
Restructuring of Contract	177.8
1) EMD Ceiling Price Increase	100.0
2) NMT Production And Retrofit Options (\$449.5 million) and Diminishing Manufacturing Sources Options (\$23.4 million)	472.9
3) Revised Long Lead Items	42.2
4) EMD Specification Relief	not separately priced
Total	\$ 1,344.2

See Appendix B for detailed information related to the Global Solution contract modification major cost areas, Appendix C for detailed information related to program risk reduction, and Appendix D for a list of the 28 major elements identified in the modification.

Global Solution Negotiations

The senior level managers that conducted the negotiations of the Global Solution did not use correct business and contracting practices during the negotiations. The FAR identifies various analytical techniques for the contracting officer to use to ensure that the final negotiated contract provides the best technical solution as well as a price that is fair and reasonable. Some of these techniques are price analysis, cost analysis, cost realism analysis, technical analysis, field pricing assistance, and audit assistance. ESC contracting and program officials supporting the senior level managers focused their efforts on the increase in the EMD ceiling and did not complete analyses on the amount and price reasonableness of the NMT production and retrofit options before final negotiations. Accordingly, we believe that at the time the final price for the Global Solution was negotiated by the former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management, she had not been provided sufficient information by the ESC contracting and program officials to know whether the negotiated price of the contract modification was fair and reasonable.

EMD Ceiling Price Increase Analyses. During the negotiations related to the EMD ceiling price increase, ESC performed a series of analyses in order to determine whether the \$100 million ceiling price increase was fair and reasonable. The specific analyses are identified in the Global Solution Contract Modifications Major

Cost Areas, Appendix B, and include an independent technical analysis and an independent damage analysis. The contracting officer stated in the price negotiation memorandum for the increase in ceiling price of EMD that

. . . based on the analyses previously identified in this PNM [price negotiation memorandum], the negotiated amount, \$101.2 [million] in conjunction with the agreed to release of liability, schedule and specification release, and reformation of the contract, is considered to be a fair and reasonable settlement of the issues which places the risk of completing the remaining portion of the contract within the revised budget on Boeing.

We reviewed the documents the contracting officer relied upon as a basis for the contract modification and concur with the contracting officer's reasoning that the ceiling price increase was a fair settlement of the EMD issues. However, the Government should not negotiate more favorable terms with Boeing on the production and retrofit portion of the contract because of Boeing losses that have already occurred on the EMD portion of the contract.

NMT Production and Retrofit Options Analyses. An evaluation of the technical solution or price evaluations were never finalized for the options included as part of the modification. ESC contracting officials had assembled an integrated process team of Boeing, Government, and NAPMA officials to analyze the production and retrofit tasks and were in the process of performing a technical evaluation of the Boeing cost proposal. ESC had put together a team of approximately 40 experts to review the proposal from Boeing. The team visited the Boeing production facility in Seattle, Washington, on a fact-finding trip in September 2002. However the fact-finding review that began on September 11, 2002, was never completed because a final price was negotiated during senior level management meetings on September 26, 2002. In addition, there is no documentation that the program office developed an independent Government cost estimate, requested audit assistance to review subcontractor costs, or used weighted guidelines to calculate reasonable profit and share ratios for the contract.

Price Reasonableness Determination. The ESC contracting officer who awarded the Global Solution modification took a "firm" position of not certifying that the price negotiated for the NMT production and retrofit portion of the Global Solution modification was fair and reasonable in the price negotiation memorandum. The contracting officer's fair and reasonable price certification is normally a required section of the price negotiation memorandum. The contracting officer stated that he normally makes fair and reasonable determinations after reviewing the results of analyses performed by the Defense Contract Audit Agency (DCAA), the Defense Contract Management Agency (DCMA), program office technical evaluations, and independent Government cost estimates and, in this instance, an analysis performed by an Integrated Process Team (One Pass). The contracting officer stated that although those analyses had begun, except for the Government cost estimate that the program office had not developed, the analyses were not completed. The contracting officer stated that once the negotiation team realized

that the \$1.32³ billion price negotiated during the senior level meetings was not a target price, but was a price not to be less than or more than, and therefore no longer negotiable, the team did not complete the analyses. Other ESC contracting officials including the pricing analyst and the Chief of AWACS International Contracts also concluded that once senior level officials set the \$1.32 billion price, there was no reason to complete the ongoing technical and price analyses for the production and retrofit option portions of the contract modification.

The Global Solution including the production and retrofit options was reviewed and approved by the ESC Judge Advocate Division and the Chief of AWACS International Contracts. The Chief of AWACS International Contracts approved the Global Solution without the contracting officer's certification for fair and reasonable pricing because he thought that price reasonableness was not an issue since the former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management had taken charge of the negotiations.

Certificate of Current Cost or Pricing Data. The contracting officer also stated that before he would sign the Global Solution modification, Boeing had to submit a Certificate of Current Cost or Pricing Data to support the Boeing cost proposal. The contracting officer thought that by requiring certified cost or pricing data, the Government would be able to recoup payments made to Boeing if the prices negotiated were much higher than actually experienced. The contracting officer was concerned that most of the subcontracts that would be necessary to support the Global Solution had not been awarded. Therefore, the proposed Boeing cost could be much higher than the actual cost Boeing would negotiate with subcontractors. As a result, Boeing provided two certificates of current cost or pricing data—one for the Boeing Global Solution proposal data except for follow-on spares and another certificate for the follow-on spares. In addition, a waiver of the FAR Part 15 requirement for certified cost or pricing data was obtained pertaining to the EMD ceiling price increase. Although the EMD ceiling price increase resolved Boeing's claims against the Government, we disagree that a waiver from certified cost or pricing data on this issue was appropriate.

Because there were no completed analyses for the contracting officer to use as a basis for determining price reasonableness, the contracting officer was correct to not certify the negotiated price as fair and reasonable. We commend the contracting officer for obtaining certified cost or pricing data. The U.S. representative to the NAPMO Board of Directors should not approve the exercise of the priced options related to the NMT production and retrofit portion of the Global Solution until adequate analyses are performed and reviewed and the options are determined to be fair and reasonable by the contracting officer. In the interim, ESC will have to negotiate with Boeing and establish some type of a "bridging" agreement while the analyses are occurring so that the NMT program can remain viable. However, such an agreement should not serve as approval of the contract in question.

On January 30, 2004, the Director, Contract Management Directorate, Inspector General of the Department of Defense, requested that DCAA perform a post award

³The Global Solution actually totals \$1.34 billion because the negotiated \$1.32 billion price does not include \$.02 billion of added follow-on spares and other unresolved contract issues costs that were not included in the contract negotiations.

audit for defective pricing of the prime contractor and major subcontracts for Contract F19628-97-C-0112, modification P00068. The Certificates of Current Cost or Pricing Data will ensure the Government is adequately protected if the contractor knowingly submitted inflated costs in the cost proposal. The results of the DCAA audit will be provided to the Commander, U.S. Air Force Electronic Systems Center.

Final Price Negotiation

On September 26, 2002, the NAPMO Board of Directors Chairman (also the former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management), the NAPMA General Manager, and the Boeing President and Chief Executive Officer of Integrated Defense Systems, negotiated a final price for the Global Solution contract modification of \$1.32 billion while analyses to determine fair and reasonable prices were in process. A letter of intent to finalize negotiations between NAPMO and the Boeing Company on the Global Solution for the completion of the NAPMO Mid-Term Modernization Program was signed by the senior leadership management team on October 15, 2002. A NATO Mid-Term Global Solution Business Agreement that contained general ground rules applicable to all elements of the Global Solution proposal was signed by the ESC contracting officer as procurement agent for NAPMO, a NAPMA contracts representative, and a Boeing contracts representative on October 15, 2002.

The negotiations were concluded in October to allow the ESC office to prepare a contract modification to be ready for signature by December 19, 2002. Several ESC personnel stated that they understood Boeing desired the modification to be signed in December so that Boeing could “book receipts,” that is, show the revenue from the contract modification on the Boeing 2002 financial statements. Another explanation for the December deadline was so that the completed negotiations could be presented to the NAPMO Board of Directors who were scheduled to meet that month.

Conclusion

Fact-finding reviews and technical reviews attempt to ensure that Government contracts contain technically sound tasks that will be efficiently performed. Air Force officials conceded that the NMT program EMD contract had been beset by technical and cost problems since program inception. The restructure and ceiling price increase of the EMD contract are expensive solutions to problems that could possibly have been avoided with more robust fact-finding and technical reviews. To fund production and retrofit tasks under the same program without fact-finding and technical reviews increases the risk of future program problems. The Air Force ESC contracting officer signed a contract modification without adequately knowing whether the contractor has proposed an efficient, technically sound solution for the Government and NAPMO requirements.

A prenegotiation position that includes an independent Government cost estimate, a technical evaluation with a review of labor hours, audit assistance by outside agencies to review direct and indirect rates, and weighted guideline calculations are

crucial to determining whether the Government is receiving a fair and reasonable price on a sole source contract. A contracting officer should not certify that the price is fair and reasonable without the results of those analyses.

The U.S. Government cannot assure NAPMO that the \$1.32 billion price paid for the Global Solution modification is fair and reasonable, in particular, the portion of the modification related to the priced options for NMT production and retrofit. The Air Force should not approve the award of the contract modification production and retrofit option contract line items until the contracting officer fully documents and justifies a fair and reasonable price.

Management Comments on the Finding and Audit Response

Air Force Comments. The Deputy Assistant Secretary of the Air Force for Contracting, and the Commander, Electronic Systems Center, concurred that the price was determined without first completing a Government cost estimate, an integrated product team analysis, a technical evaluation of hours and labor mixes, audit assistance, and weighted guidelines to establish a negotiation objective for profit. However, the Deputy Assistant Secretary did not concur with our conclusion that the award was made without knowing whether Boeing had proposed an efficient, technically capable, or economically responsible solution. The Deputy Assistant Secretary stated that the U.S. Government was acting in the capacity of agent for NAPMO and that the contracting officer was following the express direction of the Chairman of the NAPMO Board of Directors and the NAPMA General Manager when approving the contract modification. Additionally, the Deputy Assistant Secretary stated that there were other management controls since the proposed Global Solution required the NAPMO Board of Directors conceptual approval and funding approval to proceed. Finally, ESC was working on a compressed time schedule because an approval by the December 2002 Board of Directors meeting was critical to timely implementation of the Global Solution.

The Air Force has devised an action plan to which both NAPMA and Boeing have verbally agreed. The Air Force plan involves converting the options for the contract to an undefinitized contract action that uses the prices on the Global Solution as “not-to-exceed” prices on the undefinitized contract action until a new Boeing proposal is analyzed to determine fair and reasonable costs. Using an undefinitized contract action provides the most benefit to the NAPMO nations because production and retrofit program content and schedules would remain the same as under the Global Solution and would not be negotiated further. Under the undefinitized contract action approach, program content and schedule would not be negotiable and prices could only be equal to or less than the prices the NAPMO nations had previously determined to be acceptable. To begin the process, Boeing will be required to submit a new proposal for production and retrofit tasks that contains certified cost or pricing data and supporting documentation for technical and cost analysis.

Audit Response. We stand by our conclusion that the award was made without adequately knowing whether Boeing had proposed an efficient, technically capable, or economically viable solution. The FAR mandates that the contracting officer

must determine whether prices are fair and reasonable. Without the preparation of a Government cost estimate, an analysis of the contractor's proposal solution, a review of certified cost or pricing data, or a complete technical review, we find it difficult to determine how the contracting officer could have made the fair and reasonable determination. Responsible business and contracting processes involve the completion of cost estimates and technical evaluations to ensure efficient, technically capable, and economically viable solutions are developed by contractors to meet Government requirements. We agree that the U.S. Government acting as an agent for the NAPMO Board of Directors is important. As mentioned in the report, the former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management was also the Chairman of the NAPMO Board of Directors. This individual signed a "Letter of Intent to Finalize Negotiations between NAPMO and the Boeing Company on the Global Solution for the Completion of the NAPMO Mid-Term Modernisation Programme," for \$1.32 billion on October 15, 2002. The former Principal Deputy Assistant Secretary issued a letter of disqualification from participation in any matter relating to Boeing due to employment negotiations on November 5, 2002. The Global Solution contract modification for \$1.34 billion (\$1.32 billion plus \$.02 billion for items not negotiated) was signed by an Air Force contracting officer on December 17, 2002. The former Principal Deputy Assistant Secretary went to work for Boeing in January 2003. Because of this relationship the importance that the award of the contract modification be closely scrutinized is greatly increased. Whether acting in the capacity of agent or supporting the U.S. Government, Defense contracting activities at all times have a responsibility and a duty to ensure contracts are both technically and economically reasonable and that objective analyses exist to support that determination.

Recommendations and Management Comments

1. We recommend that the Deputy Assistant Secretary of the Air Force for Contracting as the U.S. representative to the North Atlantic Treaty Organization Airborne Early Warning and Control Program Management Organization Board of Directors recommend that production and retrofit option contract line items not be approved by the Board until thorough analyses of Boeing technical and cost proposals are completed by the United States Air Force Electronic Systems Center.

Management Comments. The Deputy Assistant Secretary of the Air Force for Contracting concurred with the intent of the recommendation, but stated that the Air Force needs to award production and retrofit options as an undefinitized contract action to maintain the viability of the NATO E-3 Mid-Term Modernization Program while the Electronic Systems Center and the NATO Airborne Early Warning and Control Programme Management Agency conduct technical and cost analyses. Without using an undefinitized contract action, the Air Force estimates that it will take 9 ½ months to renegotiate the production and retrofit tasks. The delay will cost an additional \$16 million based on escalation charges in the NATO E-3 Mid-Term Modernization Program contract that entitles the contractor to approximately \$1.7 million for each month the production and retrofit award is delayed beyond March 15, 2004. The Deputy Assistant Secretary stated that the member nations of

the NATO Airborne Early Warning and Control Program Management Organization have stated that no additional program funding will be made available beyond the current Global Solution requirement.

Audit Response. Although the Air Force comments do not fully agree with our recommendation, the proposed action meets the intent of the recommendation. The Air Force decision to use an undefinitized contract action as a bridging action does not lessen the Air Force Electronic System Center's responsibility to obtain and document a fair and reasonable price for the NATO AWACS production and retrofit tasks. According to the FAR subpart 16.603, a written preliminary contractual instrument that authorizes the contractor to begin immediately to perform services requires the head of the contracting activity to determine that no other contract is suitable and also requires a negotiated definitization schedule that includes dates for the submission of the contractor's price proposal, the start of negotiations, and a target date for definitization. The Electronic Systems Center Commander should document his determination that no other contract is suitable and that a definitization schedule will be prepared for the undefinitized contract action that includes dates for the submission of the contractor's price proposal, the start of negotiations, and a target date for definitization. Furthermore, during the 180-day period for definitizing the contract, the Air Force should be implementing the actions addressed in Recommendation 2.

2. We recommend that the Commander, United States Air Force Electronic Systems Center not exercise contract line item options contained in Contract F19628-97-C-0112, modification P00068, until all of the following actions are complete. We recommend that the Commander:

a. Request a proposal with certified cost or pricing data from the Boeing Company for all necessary labor, management, material, software, consumables, and services to complete tasks as defined in the North Atlantic Treaty Organization Mid-Term Production and Retrofit Statement of Work and for spare parts associated with production and retrofit diminished manufacturing sources.

Management Comments. The Commander concurred and stated that the Boeing Company will be required to submit a standard proposal as part of definitizing the contract action. Boeing will also be required to submit certified cost or pricing data and supporting documentation for technical and cost analysis.

b. Develop a Government cost estimate to complete the tasks contained in the North Atlantic Treaty Organization Mid-Term Production and Retrofit Statement of Work.

Management Comments. The Commander concurred and will develop a Government cost estimate for use in determining price reasonableness.

c. Assemble an expert team with the knowledge required to analyze production and retrofit tasks for adequacy and efficiency.

Management Comments. The Commander concurred, but stated that a team comprised of technical personnel involved in previous NATO AWACS production

efforts would be reconvened to analyze production and retrofit tasks for adequacy and efficiency only if the statement of work changes as a result of contract definitization.

Audit Response. Management comments to this recommendation, as well as comments made in response to the finding, indicate that a technical review of Boeing's proposed solution will not be accomplished unless changes are made to the statement of work. We do not fully agree with this approach. This recommendation is addressing the use of an expert team to conduct "fact finding" while analyzing the Boeing proposal to ensure it fulfills the requirements of the contract statement of work, a task that was started on the NATO E-3 Mid-Term Modernization Program contract, but never completed. We request that the Commander of the Electronic Systems Center reconsider his position and submit additional comments on the recommendation.

d. Perform a technical evaluation of the Boeing cost proposal.

Management Comments. The Commander concurred and will conduct a technical evaluation of hours and labor mixes.

e. Request audit assistance from Defense Contract Audit Agency to review prime and subcontractor proposed direct and indirect rates.

Management Comments. The Commander concurred, but pointed out that foreign subcontractors will be reviewed in accordance with the Multilateral Memorandum of Understanding.

f. Calculate weighted guidelines to determine reasonable profit and share ratios.

Management Comments. The Commander concurred and stated that the program office will use weighted guidelines, as appropriate, to determine a reasonable profit level and to ensure share ratios appropriately reflect program risk.

g. Negotiate a reasonable amount for bridge funding on the Engineering and Manufacturing Development contract while the above actions are underway.

Management Comments. The Commander concurred and stated bridge funding will be provided under the Defense FAR Supplement procedures applicable to undefinitized contract actions.

h. When the above actions are complete, ensure a contracting officer negotiates a fully documented and justifiable fair and reasonable price for the production and retrofit phase of the North Atlantic Treaty Organization Mid-Term Modernization Program.

Management Comments. The Commander concurred and stated that documentation will be completed upon definitization of the contract.

i. Ensure the contracting officer completes a fully documented price negotiation memorandum that contains a certification that the final negotiated price is fair and reasonable.

Management Comments. The Commander concurred and stated that documentation will be completed upon definitization of the contract.

Appendix A. Scope and Methodology

We reviewed documentation prepared from December 1978 through January 2004. To accomplish the audit objectives we reviewed the following:

- Agreements between the United States Government and NATO relating to the acquisition of the NATO E-3 Aircraft including: “Multilateral Memorandum of Understanding Among NATO Ministers of Defense on the NATO E-3 Cooperative Programme,” December 1978; “Memorandum of Agreement Between the NATO AEW&C Program Management Agency (NAPMA) and the United States Government Agent, the Directorate of Fighter, Command and Control, and Weapons Programs, Assistant Secretary of the Air Force (Acquisition),” March 30, 1993; and “Acquisition Agreement Between the United States Government and the NATO AEW&C Programme Management Organization (NAPMO) for Acquisition of the NATO E-3 Aircraft, Engines and Related Articles and Services,” January 17, 2001. We reviewed the above documents to determine the Air Force and NATO authorities for planning, coordinating, contracting, administering, funding, and supporting the NMT program.
- Contractual documentation relating to Contract F19628-97-C-0112, October 10, 1997, between the Air Force ESC and Boeing, including: “Guidance to the Government/Boeing Team for the Development of a NATO Mid-Term Win/Win Global Solution Agreement,” September 26, 2002; “NATO Mid-Term Global Solution Business Agreement,” October 15, 2002; “Letter of Intent to Finalize Negotiations between NAPMO and The Boeing Company on the Global Solution for the Completion of the NAPMO Mid-Term Modernisation Programme,” October 15, 2002; “Litigation Risk Assessment for NATO AWACS Mid-Term EMD Restructure,” October 18, 2002; “Price Negotiation Memorandum (PNM) for the Settlement of the Boeing Position Paper on the NMT EMD AWACS Program,” November 18, 2002; “Final Price Negotiation Memorandum,” November 19, 2002; “Legal Review of Proposed Modification No. P00068 to Contract No. F19628-97-C-0112,” December 10, 2002; “Waiver of Requirement for Certified Cost and Pricing Data Contract,” no date (pertains to modification 00068); and modification 00068, December 17, 2002. We also reviewed contract specifications and engineering change proposals relating to contract modification 00068. We reviewed the above documents to determine whether senior level managers used correct business and contracting processes in conducting the negotiations of the Global Solution.
- Acquisition management documents supporting the NMT program including: Versions 1.0 (October 10, 1997) and 2.0 (August 2001) of the Operational Requirements Document for the NATO E-3 Mid-Term Modernization Program; “Single Acquisition Management Plan for the NATO Mid-Term Modernization Program,” April 10, 2001; “Acquisition Plan for the NATO Mid-Term Modernization Program: Engineering Manufacturing Development, Production and Retrofit,” July 30, 1997; “NATO Airborne Early Warning and Control Test and Evaluation Master Plan for the NATO E-3 Mid-Term Modernization Program,” July 28, 2000; “North Atlantic

Treaty Organization E-3 Midterm Upgrades Operational Test and Evaluation Plan,” July 14, 2003; “Mid-Term Initial Operational Test and Evaluation Results Summary,” December 10, 2003. We reviewed the above documents to determine the impact of the Global Solution on the acquisition strategy and program risk associated with the NMT program.

We also contacted the staffs within Office of the Secretary of the Air Force, including personnel of the Assistant Secretary of the Air Force (Acquisition) and the General Counsel. Further, we contacted staffs at the Air Force Electronic Systems Center, the Offices of the North Atlantic Treaty Organization Airborne Early Warning and Control Program Management Organization, the Defense Criminal Investigative Service, and the Defense Contract Audit Agency.

We received assistance from the Defense Contract Audit Agency on general information with respect to regulatory requirements for submitting cost or pricing data and specific information with respect to Boeing’s policies, procedures, and practices for submitting price proposals to the government.

We performed this audit from December 2003 through February 2004 in accordance with generally accepted government auditing standards.

Limitations. We did not review the management control program because the audit focused on answering the request from the Secretary of the Air Force to determine whether correct business and contracting processes were used in the negotiation and award of the Global Solution to the Boeing Company; therefore, our scope was limited to evaluating business and contracting practices support award of the Global Solution.

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

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in DoD. This report provides coverage of the high-risk area to “Improve processes and controls to reduce contract risk.”

Prior Coverage

No prior coverage has been conducted on the NATO AWACS E-3 Program during the last 5 years.

Appendix B. Global Solution Contract Modification Major Cost Areas

Work to be accomplished under the Global Solution contract modification is grouped into five major cost areas. The EMD ceiling price increase was related to the negotiations and settlement of a cost overrun that occurred under the EMD contract. The NMT production and retrofit were options to begin the production phase for the NATO E-3 Mid-Term Modernization (NMT) Program designed to expand the performance and flexibility of the existing NATO E-3 fleet.

1. EMD Ceiling Price Increase (\$101.2 million). Initially, Boeing asserted it was entitled to a \$220 million contract increase based on overruns on the contract caused by Government and NAPMA mismanagement. As a result, the Government requested Boeing to provide a position paper describing alleged Government causes of the overrun. The Government then performed reviews of the Boeing allegations and conducted several analyses including an overall analysis, a technical report, a technical analysis, a damage analysis, a Defense Contract Audit Agency (DCAA) analysis, a Defense Contract Management Agency (DCMA) analysis, and an Air Force Materiel Command Price analysis. As a result, the Government and Boeing agreed to settle the issues for \$101.2 million. The agreement was based on providing both specification and schedule changes to Boeing, changing the contract from a Fixed-Price Incentive-Fee to a Firm Fixed-Price type contract, and releasing the Government from all known and unknown claims. Settlement was achieved on October 16, 2002.

Position Paper. In June 2002, Boeing submitted a position paper asserting an entitlement to an adjustment in ceiling price of at least \$220,473,623. Boeing alleged Government and NAPMA mismanagement through failure to define requirements, unreasonable interpretation of requirements, increase in the scope of requirements, unreasonable delay and lack of cooperation, and failure to disclose superior knowledge. The position paper included citations to case law supporting recovery of costs.

Allegation Reviews. On October 18, 2002, the Assistant Secretary of the Air Force for Acquisition received an overall analysis of Boeing's asserted entitlement to a contract price increase, a technical report prepared by ESC analyzing the factual contentions made in the Boeing position paper, a technical analysis prepared by an independent expert, and a damage analysis prepared by an independent expert. The analysis concluded that a negotiated settlement would place the risk of completing the remaining portion of the contract within the revised budget on Boeing and that keeping the matter open could increase the Government's liability.

2. NMT Production and Retrofit Options (\$449.5 million) and Diminishing Manufacturing Sources Options (\$23.4 million). The production and retrofit option will procure 17 mid-term aircraft kits developed under the EMD portion of the contract, 2 mission simulator kits, and spare parts. The previous AWACS configuration will be removed from the 17 NATO AWACS aircraft and mid-term kits will be installed. Of the 18 NATO AWACS aircraft, 1 will have the kit retrofitted under the EMD portion of the contract for test purposes.

Since contract award, the problem of obtaining spare parts for maintenance and replacement from diminishing manufacturing sources has become a larger and much more costly portion of the program than originally anticipated. Under the proposed modification option, Boeing accepts total responsibility for resolving issues related to diminished manufacturing sources for spare parts critical to the delivery of the production baseline.

3. Revised Long-Lead Items (\$42.2 million). The modification establishes contract line items for spare parts with long-lead times for delivery associated with the pre-production phase of the EMD contract and spare parts with long-lead times for delivery from diminished manufacturing sources.

4. EMD Specification Relief (not separately priced). The Government and Boeing, with concurrence from NAPMO, have agreed to performance requirement changes including clarification of required system response times, reduction in the number of tracks handled by the system, and adjustment of output power requirements. The value of the specification relief was not quantified.

Appendix C. Program Risk Reduction

Contract modification P00068 will reduce program risk in executing the NATO AWACS Mid-Term Modernization Program. Specifically, as a result of modification P00068, Air Force and NATO:

- revised the program acquisition strategy to require that the Commander, NATO Force Command, make an aircraft retrofit decision based on the successful results of operational test and evaluation;
- better defined contract specifications through an engineering change proposal and established the functional baseline configuration for contract modification P00068; and
- included contractor performance events and authorized the contracting officer to reduce or suspend contract payments if the contractor is not making satisfactory progress towards accomplishing the performance events.

Revised Program Acquisition Strategy. On November 21, 2002, the Air Force Program Executive Officer for Command, Control, and Combat Support Systems approved an update to the “Annex to the AWACS Modernization and Sustainment Support Single Acquisition Management Plan,” April 10, 2001 (the SAMP Annex). The SAMP Annex identifies the elements of the NATO Mid-Term Modernization Program and outlines the management approach to executing the program. The revised SAMP Annex provides that the Commander, NATO Force Command, will make the decision to retrofit the 17 NATO E-3 aircraft based upon the results of operational test and evaluation. This change reduces program risk by insuring that Boeing cannot begin work to retrofit the E-3 aircraft with the NMT capability until operational test and evaluation verifies that the NMT program meets all user requirements and that the system is operationally effective and suitable.

Revised Program Schedule. The latest draft schedule, “Global Solution Phased Development / Initial Production Overview 8a,” January 7, 2004, scheduled operational test and evaluation to begin August 22, 2005, almost 24 months later than the original baseline schedule to reduce program risks. The extra time will be used to complete hardware and software design, systems testing, specification compliance verification, and logistics support before the operational test and evaluation.

Defined Contract Specifications. Engineering Change Proposal 1360R2, “Changes to the SS204-16001-5A and SS204N-16002-5A Specifications to Align Verification Requirements and Update the Functional Baseline (CDRL A003),” October 29, 2002, better defines contract specifications through establishing the functional baseline for implementing contract modification P00068.

The challenge in defining contract specifications resulted from the Air Force and NATO not fully defining system performance requirements in an Operational Requirements Document (ORD) before awarding the EMD contract. As a NATO

(non-U.S. DoD) program, the NMT program was not subject to and did not fully adhere to DoD policy on requirements generation, as defined in Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3170.01B, "Requirements Generation System," April 15, 2001. Specifically, CJCSI 3170.01B, as well as earlier versions of the CJCSI dating back to June 13, 1997, requires that the ORD state systems requirements in output oriented and measurable terms. CJCSI 3170.01B further requires that system requirements should include threshold values (minimum acceptable operational values below which the utility of a system becomes questionable) and objective values (an operationally significant increment above the threshold value). Neither the "Operational Requirements Document for the NATO E-3 Mid-Term Modernization Program (Version 1.0)," October 10, 1997, or the revision "Operational Requirements Document for the NATO E-3 Mid-Term Modernization Program (Version 2.0)," August 23, 2001, state systems requirements in output oriented and measurable terms, with threshold and objective values. Furthermore, the requirements correlation matrix in Version 2.0 of the ORD stated that NATO had not conducted a study or analysis to determine what minimum system capabilities were required from an operational perspective. It also stated that the ORD only levied requirements to improve system functionality and provided no improvement factors.

Boeing Engineering Change Proposal 1360R2, which the Air Force accepted on December 17, 2002, provides an agreement between ESC and Boeing, regarding contract specifications. Examples of key provisions in the engineering change proposal that will better define contract specifications and reduce program cost risk include:

- establishing requirements for man-machine interface maximum response time for all switch action categories,
- establishing requirements for mission system and interface system segment track capacity (the number of ground elements or aircraft that the system can monitor) consistent with the expected density of European airspace,
- setting requirements for output power that are consistent with Federal Aviation Administration and NATO standards, and
- establishing requirements for a low frequency vibration to address a satellite communication modem problem.

Contractor Performance Events. To allow program management to better define for ESC whether Boeing is demonstrating satisfactory performance, modification P00068 includes 14 contractor performance events, with completion dates between December 2003 and March 2008. At each event, the contracting officer has the authority to reduce or suspend contract payments if the contracting officer determines that the contractor has not made satisfactory progress. The following table identifies the 14 contractor performance events and associated completion dates.

Contractor Performance Events

<u>Performance Event</u>	<u>Completion Date</u>
1. NATO Developmental Lab Diminishing Manufacturing Sources Processor and Upgrade on Dock at Boeing	December 15, 2003
2. NATO Avionics Integration Lab Diminishing Manufacturing Sources Processor and Upgrade Installation and Checkout Complete	April 1, 2004
3. NATO Aircraft 1 Diminishing Manufacturing Sources Processor Upgrade and Installation and Checkout Complete	July 15, 2004
4. Mission Computing Upgrade and Diminishing Manufacturing Sources Qualification Complete	September 30, 2004
5. STAR II* Replacement Identification Friend or Foe Processor Subcontractor Qualification Testing Complete	March 3, 2005
6. NATO Aircraft 2 Retrofit Readiness Review Complete	June 10, 2005
7. Formal Maintenance Demonstration / Training / Regression Validation Complete	July 1, 2005
8. STAR II Replacement, First Production Delivery on Dock at Manching (Germany)	October 12, 2005
9. Ground Test Station Installation and Checkout Complete	December 22, 2005
10. Test Plan Readiness Review Complete	February 24, 2006
11. Mission Simulator 1 Technical Order Verification and Validation Complete	March 15, 2006
12. NATO Aircraft 2 Delta Qualification Complete	August 11, 2006
13. NATO Aircraft 2 Technical Order Verification and Validation Complete	August 16, 2006
14. Mission Simulator 2 Technical Order Verification and Validation Complete	March 14, 2008

*STAR II is the Boeing nomenclature for the radar data processor for the identification friend or foe integrator, it is not an acronym.

Appendix D. Major Elements of the Global Solution Contract Modification

1. Restructure engineering manufacturing & development contract line item numbers.	15. Add initial spares for priced option contract line item number 2010.
2. Restructure integrated master plan events.	16. All follow-on spares for priced option contract line item number 2011.
3. Revise the EMD statement of work.	17. Revise interim contractor support time and material requirements.
4. Revise EMD contract deliverable requirements lists.	18. Add software change working group time and material requirements.
5. Increase the EMD fixed-price incentive-firm portion of the contract-ceiling price.	19. Revise lab and aircraft time and material maintenance requirements.
6. Convert EMD fixed-price-incentive firm sub-contract line item numbers to firm-fixed price.	20. Add a not-to-exceed requirement defining on-site team operator replacement support requirement contract line item number 5001.
7. Delete Period 4 of the EMD award fee.	21. Add a not-to-exceed requirement defining disposition of priority 3 & 4 contract line item number 5002.
8. Revise the EMD contract line item number delivery schedule.	22. Add a not-to-exceed requirement defining satellite communication modem sway resolution contract line item number 5003.
9. Incorporate Engineering Change Proposal 1360R2.	23. Add a not-to-exceed requirement defining availability of operations manuals for initial operational test and evaluation contract line item number 5004.
10. Add EMD Diminished Manufacturing Sources sub-contract line item number.	24. Add a not-to-exceed requirement defining commercial off the shelf software with diminishing manufacturing sources responsibility contract line item number 5005.
11. Reduce and deobligate the long-lead phase 1 contract line item number 1002.	25. Add not-to-exceed requirement defining additional test effort to support IMS 7d contract line item number 5006.
12. Reduce and deobligate the diminished manufacturing sources bridge time-and-materials.	26. Add a special contract clause requirement for cost as an independent variable (CAIV), H.C.78.
13. Add long-lead phase II requirements.	27. Incorporate special release of claims language.
14. Add production and retrofit priced option contract line item numbers.	28. Progress payments are not allowed on former EMD fixed price incentive firm contract line item numbers that have been converted to firm fixed price contract line item numbers.

Appendix E. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
 Director, International Cooperation
 Director, Defense Procurement and Acquisition Policy
Under Secretary of Defense (Comptroller)/Chief Financial Officer
 Deputy Chief Financial Officer
 Deputy Comptroller (Program/Budget)
Assistant Secretary of Defense (Public Affairs)
General Counsel of the Department of Defense
Special Assistant to the Deputy Secretary of Defense

Department of the Navy

Assistant Secretary of the Navy (Manpower and Reserve Affairs)
Naval Inspector General
Auditor General, Department of the Navy

Department of the Air Force

Secretary of the Air Force
Assistant Secretary of the Air Force (Financial Management and Comptroller)
Auditor General, Department of the Air Force
Deputy Assistant Secretary of the Air Force for Contracting
Commander, U.S. Air Force Electronic Systems Center

Combatant Command

Inspector General, U.S. Joint Forces Command

Other Defense Organizations

Director, Defense Contract Audit Agency

Non-Defense Federal Organizations

Department of Justice
Office of Management and Budget
Office of Federal Procurement Policy

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 Commerce, Science, and Transportation
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 Efficiency and Financial Management, 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

Department of the Air Force Comments

30 March 2004

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

FROM: Assistant Secretary of the Air Force (Acquisition) – SAF/AQ
1060 Air Force Pentagon
Washington, D.C. 20330-1060

SUBJECT: DoD IG Draft Report on The NATO AWACS Mid-Term Modernization Program
“Global Solution” (Project No. D2004CF-0068), dated 25 February 2004

Ref: DoD IG Memo of 25 Feb 2004

This is in response to your referenced memorandum requesting the Deputy Assistant Secretary of the Air Force (Contracting) and the Commander, Electronic Systems Center (ESC) provide Air Force comments on the subject draft report. The attachment provides our concurrence or non-concurrence on the finding and each recommendation as requested.

The report analyzes whether appropriate business and contracting procedures were used to determine whether the Global Solution Contract modification was fair and reasonable. The Air Force concurs with the overall intent of the DoD IG finding and recommendations. However, the Air Force has concerns with the basis from which the audit finding was reached – that the acquisition Agent role was not performed correctly. The Air Force has begun implementation of a viable alternative solution that addresses the recommendations, and is consistent with the role of the USAF as acquisition Agent for the direct commercial contract between Boeing and the NATO Airborne Early Warning and Control Program Management Organization.


CHARLES A. JOHNSON
Lieutenant General, USAF
ESC Commander


CHARLIE E. WILLIAMS
Deputy Assistant Secretary (Contracting)
Assistant Secretary (Acquisition)

Attachment:
Air Force Response to DoD (IG) Draft Report D2004CF-0068

cc: Assistant Secretary of the Air Force (Financial Management and Comptroller)

Air Force Response to DoD (IG) Draft Report D2004CF-0068

1. Overview: Acting on behalf of the NATO Airborne Early Warning and Control Program Management Organization (NAPMO) Board of Directors (BOD), the Electronic Systems Center (ESC) awarded a contract for the Engineering and Manufacturing (EMD) phase of the NATO Mid-Term Program (NMT) in 1997. During the original period of performance, Boeing encountered numerous performance problems, including early Diminishing Manufacturing Sources (DMS) issues and poor system performance. The resulting cost growth drove the necessity of a “Global Solution” contract modification to restructure the original contract in order to reduce overall program risk - resulting in an acceptable business deal to both parties for a variety of reasons.

One of the most important considerations influencing the negotiation of the Global Solution was that the NAPMO BOD nations required a ceiling for total NMT program financial liability. The 13 nations contributing to the NMT program would not accept periodic, incremental program price increases. The nations needed a pre-established program cost with a stable program budget and ceiling to gain approval for the financial obligations from their respective governments. Additionally, Boeing requested a programmatic settlement to ensure continued program viability. Boeing projected an enormous EMD loss and had documented a possible \$200±M Request for Equitable Adjustment (RFEA).

The timing of the Global Solution contract award also was critical to NATO and the 13 member nations. The BOD routinely meets bi-annually in June and December. In addition, the BOD's Operational, Technical, and Support (OTS) and Legal, Contracts, and Finance (LCF) Committees convene one to two months in advance of each BOD meeting to review, evaluate, and recommend action on issues that will be addressed by the BOD. The regimented NAPMO cycle of committee meetings required an accelerated process to make a program decision at the Dec 02 BOD meeting. This schedule established a need to approve the Global Solution Acquisition Strategy/Contract Changes before the end of Calendar Year 2002 to gain approval of program funding increases through each nation's internal government procedures. Furthermore, Boeing's desire to be able to reflect additional projected revenue by signing a contract modification in 2002 provided the NATO AWACS Team¹ with negotiation leverage and resulted in a reduction of the final Global Solution price.

2. Finding and Response: The subject report presents a single fundamental finding. The finding is included below with the Air Force response.

- a. **Finding:** The senior level managers that conducted the negotiations of the Global Solution modification did not use correct business and contracting practices to arrive at a negotiated amount.

The rationale for this finding is given as:

¹ The NATO AWACS Team consisted of ESC, NATO AEW&C Programme Management Agency (NAPMA), NAPMO, and PEO Office.

- 1) Steps were skipped from the normal US contract negotiation and award process:
 - a) Government cost estimate not completed
 - b) Analysis of the proposed statement of work not completed
 - c) Technical Evaluation not completed
 - d) Audit assistance not sought
 - e) Weighted guidelines not used
- 2) FAR guidelines were not universally followed.
- 3) Schedule was a detriment to US Government (USG) negotiations and a benefit to Boeing only.

Response: Air Force concurs with the intent of the finding. Nonetheless, given the circumstances and international pressures associated with the negotiation of the Global Solution, the Air Force exercised appropriate business and contracting practices. As the draft DoD IG report makes clear, the Global Solution “resulted in a program with less risk for NATO than the original contract . . . and avoided litigation to adjudicate an equitable price adjustment request proposed by Boeing.” Draft Report, Project No. D2004CF-0068, p. 5.

The Air Force concurs that the price was determined without first completing an independent cost estimate, an IPT analysis, a technical evaluation of hours and labor mixes, and weighted guidelines to establish a negotiation objective for profit. While a complete audit was not requested, DCMA verified rates and factors during the negotiation of the Global Solution. However, the Air Force does not concur with the conclusion that the award was made without knowing whether Boeing had proposed “an efficient, technically capable, or economically responsible solution.” Comments related to the finding are discussed below.

USG as NAPMO’s General Agent: As noted by the DoD IG, the acquisition of the Mid-Term Modernization effort is a direct commercial sale between NAPMO and Boeing under Section 38 of the Arms Export Control Act (22 U.S.C. Sec 2778). The USG is not a party to the contract. The role of the USG is set forth in three international agreements: (1) the Multilateral Memorandum of Understanding (MMOU), (2) the Acquisition Agreement, and (3) the Agency Agreement. These documents clearly define how the USG will act in the capacity of Agent for NAPMO.² Those agreements contemplate that the USG (and the

² Section V of the MMOU, Paragraph 3, provides that the Acquisition Agreement will:

(a) designate the USG as the Agent of NAPMO to negotiate, enter into and administer contracts for the NATO E-3A aircraft. The parties to these contracts will be NAPMO and the US contractors. As Agent, the USG will, inter alia:

(1) use appropriate US procurement practices and regulations i.e., Defence Acquisition Regulation (DAR/ASPR); however, Industrial Collaboration subcontractors will not be subject to USG Cost Accounting Standards, Examination of Records by the Comptroller General and any other clauses inappropriate for the procurement. . . .

Similarly, the Acquisition Agreement provides:

contracting officer) will follow DoD procurement regulations, as appropriate. It is critical to recognize that the USG contracting officer acts on behalf of NAPMO. The contracting officer, acting pursuant to his contracting officer's warrant from NAPMO, must act within the scope of his authority. Specifically, the contracting officer implements the directions issued by NAPMO. As regards the Global Solution, the relevant agreements were signed by the NATO AEW&C Programme Management Agency (NAPMA) General Manager and the Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management in her capacity as NAPMO BOD Chairman. The contracting officer believed that these officials had the authority to make business agreements, subject to the approval and direction of the NAPMO BOD.³ The agreements and contract action were, in fact, approved by the NAPMO BOD.

Program History and Structure: The NATO Airborne Early Warning and Control (NAEW&C) Programme began with the signing of the "Multilateral Memorandum of Understanding (MMOU) between NATO Ministers of Defense on the NATO E-3A Cooperative Programme," December 6, 1978.⁴ The MMOU established the NAPMO as a subsidiary body of NATO. NAPMO was directed to "seek international status as a legal entity under NATO charter."⁵

The NAPMO Charter was approved by the North Atlantic Council (the governing body of NATO) on December 8, 1978. The NAPMO Charter:

- a. Established NAPMO as a subsidiary body of NATO per Art. IX of the North Atlantic Treaty and within the meaning of the Ottawa Agreement;⁶
- b. Defined the legal status of NAPMO;⁷ and

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- The authority of the USG includes the authority to "negotiate, enter into and administer contracts for and in the name of the NAPMO under the most advantageous terms and conditions available, consistent with DoD regulations and procedures except where this arrangement specifically provides otherwise;" (AA II, 1(a))
 - "The USG as Agent will use DoD procurement regulations and existing DoD negotiating procedures in effecting such procurements as appropriate." (AA II, 2(a)(3)), and
 - "The terms and conditions in such contracts will, in substance, be those used in USG DoD contracts modified as appropriate." (AA II, 2(a)(4)).

Because the foundation document for this DCS contract is the MMOU, interpretation of the term "appropriate" must be consistent with that document. In this context, what is "appropriate" may well be determined by the direction of the principal in this agency relationship.

³ Decisions of the NAPMO BOD must be reached by consensus.

⁴ It was addended in December 1990 to add Near-Term Modernization upgrades. That addendum was then amended on 13 August 1997 to add the Mid-Term Modernization Programme. A second amendment to the addendum has to been sent to the NAPMO nations for signature, increasing the contribution ceiling for the Mid-Term Modernization Programme as a result of the Global Solution.

⁵ MMOU, Section IV, paragraph 1.

⁶ This document covers the status of NATO, national representatives, and the international staff.

-
- c. Delineated the authority of NAPMO regarding agreements and contracts.

Section IV, Article 9 defines NAPMO's authority.

Within the scope of its functions and in the name of NATO, NAPMO shall have the authority to:

- a. Conclude agreements and contracts;
- b. Conclude administrative agreements with other NATO bodies; and
- c. Acquire and dispose of movable and immovable property.

The NAPMO was established to plan, control, supervise and implement the program.⁸ The organization is comprised of a BOD, a Management Agency under a General Manager, and Committees.⁹ The management agency established in the MMOU is called the NAPMA headed by a General Manager directly responsible to the BOD. This agency runs the day-to-day operation of NAPMO, managing the contracts, finances, security, and personnel in support of NAPMO and its mission.

In this context, NAPMO had express authority to approve agreements and contracts, and the General Manager of NAPMA had responsibility for day-to-day management of contracts. The USG contracting officer implemented the program in accordance with the direction of the NAPMA General Manager and the Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management who signed the 15 Oct 02 Letter of Intent for the Global Solution as NAPMO BOD Chairman, subject to the approval and direction of the NAPMO BOD.

Over the course of 2002 and especially into September 2002, ESC, NAPMA, and Boeing representatives were constantly meeting to work on technical, contracting and schedule issues, and to establish plans for negotiations to fully execute the Global Solution agreement. By the end of September 2002, the parties' overall objectives were established; however, the parties still needed to work out many details. Consistent with Alternative Dispute Resolution (ADR) practices, and based upon all of the information that they had been gathering over the course of more than a year directly and through their staffs, the senior managers established in September 2002 the basic framework for the Global Solution, including the total cost for the entire program. This permitted the respective teams to focus on working out the many details of the agreement.

The Global Solution Perspective: Significant technical challenges facing the NMT Program at the beginning of 2002, coupled with a significant and continued EMD cost

⁷ Section III of the NAPMO Charter is titled "Legal Status." It explains the juridical personality of NAPMO, the privileges and immunities of NAPMO, and the rights and privileges to be exercised by NAPMO.

⁸ Section IV – Programme Management, paragraph 1.

⁹ Ibid.

growth required high-level attention from NAPMO, NAPMA, ESC, and appropriate SAF offices and Boeing management to determine a way ahead addressing the needs of both parties while assuring a viable and achievable NMT Program. A non-severable “Global Solution” approach was determined to be the optimal way to meet these needs. The Global Solution:

Satisfied NATO’s needs:

- Rebaselined EMD with a schedule that was achievable and a new performance baseline that could be built.
- Provided NAPMO with a total program budget to include firm contract prices (for first time).
- Enabled NAPMO to make a single Amendment to the Addendum to the MMOU to fully fund the total program.
- Eliminated, with a release of claims, the unbounded risk to the program resulting from Boeing’s EMD cost growth, including the potential cost of litigation.
- Provided for Boeing’s assumption of Diminishing Manufacturing Sources (DMS) risk during the critical period leading up to Production and Retrofit (PAR) award.
- Gave NATO an opportunity to receive a share of cost underruns for Long Lead (LL) and PAR but capped NATO’s risk against overruns with a 0/100 overrun share ratio.
- Provided continuation of the program to fill a critical need identified by the NATO AEW&C Force Command.
- Protected the nations’ investment in the program.

Satisfied Boeing’s needs:

- Rebaselined EMD with a schedule that was achievable and a new performance baseline that could be built.
- Provided for recovery of \$101.2M in costs that were beyond the existing EMD ceiling price.
- Avoided risk and costs of litigation for EMD overrun.
- Provided for immediate payments of IMP events. Boeing had no contract financing for seven months prior to Global Solution.
- Received progress payment financing on LL tasks awarded with Global Solution.
- Provided Boeing with an opportunity to recover some EMD losses with strong performance in PAR. Made business case for Boeing to continue the contract.
- Allowed Boeing to finally “end the bleeding” on EMD cost growth and present a positive business plan to corporate auditors.

The proposed Global Solution required NAPMO BOD approval (i.e., conceptual and funding approval) to proceed. A key function of the BOD is to provide decisions on significant financial and budgetary matters, and on major program changes.

The Dec 2002 BOD meeting was critical to timely implementation of the Global Solution Business Deal. Within the BOD, 13 different national budgetary cycles must always be considered, and the member nations must be given adequate time to ensure funding approval. The Dec 2002 BOD was critical because it was one year from the time funding would be required for the PAR portion of the contract, and one year appears to be the

minimum time normally required for nations to get approval from their governments to increase the NMT Program funding ceiling. The NMT acquisition team awarded the Global Solution contract modification in only eight months under intense senior management oversight of the NAPMO BOD Chairman (Principal Deputy Assistant Secretary of the Air Force), NAPMA, ESC, and the PEO. The Dec 2002 approval to proceed with the Global Solution business deal provided a viable solution for both NATO and Boeing. The Global Solution avoided potential litigation, allowing the contractor business stability while definitizing program activities through the end of EMD and completion of PAR.

The failure to reach agreements and submit these new agreements to the NAPMO BOD in December 2002 would have resulted in a slip of three to seven months, depending upon when this could have been presented to another BOD meeting. In the totality of the circumstances, a delay of this magnitude could have jeopardized the continuance of the program.

USAF Action Plan: The Air Force considered numerous alternatives on how best to implement the audit report recommendations. Two alternatives were identified that had clear benefits over the other alternatives considered. The first alternative was to negotiate an interim extension of the existing NMT contract. The second alternative was to issue an Undefined Contract Action (UCA) for PAR with a price not to exceed the existing PAR option prices. The Air Force concluded the second alternative provided more benefit to the NAPMO nations than the first. Under the first alternative, PAR program content, schedule, and price would be negotiable while under the second alternative, program content and schedule would not be negotiable. The NAPMO nations would not accept an alternative that reduced program content because of the risk of not meeting user requirements. Under the UCA approach, only prices would be negotiable and those prices could only be equal to or less than the prices the NAPMO nations had previously determined to be acceptable.

Awarding PAR on a not-to-exceed (NTE) basis is the best approach to satisfying the audit report recommendations, while not crippling the NMT program. Both NAPMA and Boeing have orally agreed this is an acceptable way forward for the program. This approach would create a path for the Government to comply with the recommendations provided in this report while minimizing the schedule impact and ensuring the viability of the NMT Program. Issuing an NTE award would also eliminate the escalation costs that would have to be added to the contract (\$1.7M per month) and avoid the additional costs to NAPMO and ESC to manage the NMT Program during any schedule extension.

ESC and NAPMA will convert the options for the F19628-97-C-0112 contract to an undefinitized contract action (UCA) with three separate NTE prices (for PAR, PAR DMS, and Initial Spares). The current FPIF target prices and firm fixed prices will become the NTE prices in the UCA. All proposal preparation costs will be included in the NTE prices. ESC and NAPMA plan to modify the Exercise of Options provision in the contract

by deleting the language pertaining to escalation of the PAR option prices. Standard DFARS guidance will be used as the basis for definitizing the UCA.¹⁰

Boeing will be required to submit certified cost or pricing data and supporting documentation for technical and cost analysis. The scope of PAR, PAR DMS and Initial Spares will remain unchanged. It is anticipated there may be a day-for-day schedule slip for each day the UCA is awarded after 15 Mar 04. Except as provided above, the UCA will incorporate the provisions of the existing contract.

3. Recommendations and Responses: The subject report provides a series of recommendations. The Air Force concurs with the collective intent of the recommendations provided the plan to award PAR, PAR DMS, and Initial Spares (hereinafter referred to as PAR options) as an NTE option is implemented as set forth herein. A more detailed response to each recommendation is provided below.

- a. **Recommendation:** We recommend that the Deputy Assistant Secretary of the Air Force for Contracting as the American representative to the North Atlantic Treaty Organization Airborne Early Warning and Control Program Management Organization Board of Directors recommend that production and retrofit option contract line items not be approved by the Board until thorough analyses of Boeing technical and cost proposals are completed by the United States Air Force Electronic Systems Center.

Response: Air Force concurs with the intent of the recommendation, but needs approval to award PAR options (with an NTE) so that the NMT program can proceed while ESC and NAPMA conduct a thorough technical and cost analysis that satisfies the appropriate DoD IG recommendations. The proposed course of action, awarding PAR options with a not-to-exceed price through a UCA, preserves program cost and schedule. The UCA will be definitized consistent with federal procurement law using Air Force best business practices. This approach allows the program to continue ahead while ESC and NAPMA verify that the PAR options' prices are fair and reasonable. Also, this approach mitigates any concerns other NAPMO member nations have regarding program impacts from the DoD IG investigation.

This approach is necessary to maintain the viability of the NMT Program. The NAPMO member nations, through the BOD, have let it be known that no additional program funding

¹⁰ A letter was issued to Boeing on 11 Mar 04 requesting an NTE proposal. We expect that the Contractor will respond to the ESC and NAPMA request with an NTE proposal. On 12 Mar 04, ESC and NAPMA sent Boeing a proposed pre-contract cost agreement, and Boeing will acknowledge receipt and agreement. The pre-contract cost agreement provides that Boeing may recover (subject to the cost principles in FAR Part 31) any costs that it incurs to perform the contract if a contract is awarded. If a contract is not awarded, it is expected that Boeing will agree that it cannot recover these pre-contract costs. In the interim, the SPO plans to seek PEO approval to issue the UCA following the guidance provided in the DFARS. ESC and NAPMA plans to have a draft UCA contract modification ready for review by 1 Apr 04, with the expectation Boeing will agree to complete its review by 7 Apr 04. The SPO, NAPMA, and Boeing agreed to use their best efforts to execute the UCA by 10 May 04, if approved by the PEO. The SPO and NAPMA have agreed to expedite this schedule as much as possible. The Contractor is expected to provide a schedule that provides for definitization within 180 days IAW DFARS 217.7404-3.

will be made available beyond the current Global Solution requirement. Delaying the PAR award until completion of the standard proposal evaluation and negotiation process would result in unacceptable significant cost and schedule impacts to the program. This is so, in large part, because the NMT contract includes an escalation clause which entitles the contractor to approximately \$1.7 million for each month the PAR award is delayed beyond 15 Mar 04. A schedule has been developed which shows a 9 ½ month period is needed to renegotiate PAR following the standard Air Force proposal evaluation process. This results in an additional financial impact to the program of approximately \$16 million, which is not included in the current program funding. Awarding PAR as an NTE UCA, however, mitigates the program impacts of this price escalation and satisfies the needs of the NAPMO member nations.

The NAPMO nations approved award of PAR at the Dec 03 BOD meeting, but the US placed a confirmation on the award pending the outcome of this investigation. The only step required to award PAR, as set forth above, is for the US to lift this confirmation. The proposed award of a UCA with an NTE of the current PAR price allows the US to negotiate a fair and reasonable price for the PAR effort in accordance with applicable federal procurement law and using best Air Force business practices during definitization of the UCA. Given this planned course of action, the US representative to the BOD plans to lift the US confirmation on the PAR decision.

- b. **Recommendation: Request a proposal with certified cost and pricing data from the Boeing Corporation for all necessary labor, management, material, software, consumables, and services to complete tasks as defined in the North Atlantic Treaty Organization Mid-Term Production and Retrofit Statement of Work and for spare parts associated with production and retrofit diminished manufacturing sources.**

Response: Air Force concurs with the recommendation, contingent upon the ability to award the PAR options as an NTE through a UCA. The Boeing Company will be required to submit a standard proposal as part of definitizing the UCA.

- c. **Recommendation: Develop an independent Government cost estimate to complete the tasks contained in the North Atlantic Treaty Organization Mid-Term Production and Retrofit Statement of Work.**

Response: Air Force concurs with the intent of this recommendation, but has a concern due to the requirement to develop an independent cost estimate. If the phrase “Develop an independent Government,” were changed to “Develop a Government,” the Air Force would concur. An independent cost estimate is required for ACAT I programs. NMT is considered an ACAT III program.

- d. **Recommendation: Assemble an expert team with the knowledge required to analyze production and retrofit tasks for adequacy and efficiency.**

Response: Air Force concurs with this recommendation. An expert team of ESC, NAPMA, and Boeing personnel jointly developed the current PAR Statement of Work

(SOW). The team was comprised of technical personnel involved in previous NATO AWACS production efforts and/or other production contracts. All functional areas were included in the PAR SOW development. If the SOW changes as a result of UCA definitization, this team will be reconvened to analyze production and retrofit tasks for adequacy and efficiency.

- e. **Recommendation: Perform a technical evaluation of the Boeing cost proposal.**

Response: Air Force concurs with the recommendation.

- f. **Recommendation: Request audit assistance from Defense Contract Audit Agency to review prime and sub-contractor proposed direct and indirect rates.**

Response: Air Force concurs with the recommendation. MMOU, Section V, paragraph 3(a)(1), specifically states: "however, Industrial Collaboration subcontractors will not be subject to USG Cost Accounting Standards, Examination of Records by the Comptroller General and any other clauses inappropriate for the procurement." Audit assistance for foreign subcontractors will be requested as necessary in accordance with MMOU Section XVII. MMOU Section XVII, paragraph 3 states: "For all other aspects of the program, participating governments will provide free of charge their normal government auditing services in accordance with their national standards and procedures for all contracts and subcontracts placed within their own national industries for any aspect of the programme. Such services will be performed on an agency basis and coordinated by the NAPMA. The NAPMO contracting officer and his representatives have the right to be afforded an understanding of audit reports and to request additional audit information when necessary."

- g. **Recommendation: Calculate weighted guidelines to determine reasonable profit and share ratios.**

Response: Air Force concurs with this recommendation. The program office will use weighted guidelines, as appropriate, to determine a reasonable profit level. To the extent share ratios remain a part of the agreement, the contracting officer will ensure that the share ratios appropriately reflect program risk.

- h. **Recommendation: Negotiate a reasonable amount for bridge funding on the Engineering and Manufacturing Development contract while the above actions are underway.**

Response: Air Force concurs with this recommendation. Bridge funding will be provided under the standard DFARS procedures applicable to UCAs.

- i. **Recommendation: When the above actions are complete, ensure a contract officer negotiates a fully documented and justified fair and reasonable price for the production and retrofit phase of the North Atlantic Treaty Organization Mid-Term Modernization Program.**

Response: Air Force concurs with this recommendation and will complete documentation upon definitization of the UCA.

- j. **Recommendation: Ensure the contracting officer completes a fully documented price negotiation memorandum that contains a certification that the final negotiated price is fair and reasonable.**

Response: Air Force concurs with this recommendation and will complete documentation upon definitization of the UCA.

6. Other Modifications: In addition to the Air Force responses to the 10 recommendations, the following modifications are recommended:

- a. List of Acronyms
AEW&C: Change “The NATO Airborne Early Warning and Control” to “Airborne Early Warning and Control.”
- b. Page i, Paragraph 4 (beginning: The NATO AWACS . . .)
The second sentence is incorrect. The US Air Force did not award a contract to Boeing. NAPMO awarded the contract as a Direct Commercial Sale under Section 38 of the Arms Export Control Act (codified at 22 U.S.C. §2778). The United States Government is not a party to the contract. The parties are NAPMO and Boeing.
- c. Page i, Paragraph 4 (beginning: The NATO AWACS . . .)
Lines 5 and 7: There are 2 references to the Global Solution “Fixing” performance problems. This is not the case. The Global Solution resolved previous business issues resulting from Boeing’s overrun on EMD, and it determined contract prices in response to Boeing’s position paper. It also modified specification requirements. The relaxation of certain performance requirements did not “fix” Boeing’s design and performance shortcomings. In other words, the Global Solution settles a collection of outstanding issues regarding several facets of the NMT Program.
- d. Page ii, Paragraph 1 (beginning: Results . . .)
First sentence. Disagree with the statement. Air Force managers executed a business agreement that was reached by the NAPMO BOD Chairman and the NAPMA General Manager. The procedures followed were consistent with the explicit instructions provided by them to Air Force managers.
- e. Page ii, Paragraph 2 (beginning: The senior level . . .)
The third sentence is incorrect. Air Force contracting officials did not award the contract. An Air Force contracting officer with a NATO warrant¹¹ signed the contract “for the United States as Agent for NAPMO.” The Price Negotiation Memorandum indicated that the Global Solution modification was fair and reasonable.

Revised

Revised

Revised

¹¹ This warrant was issued in accordance with the MMOU.

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Revised

- f. Page ii, Paragraph 3 (beginning: The American representative . . .)
Change "The American representative..." to "The US BOD representative...."
- g. Page ii, Paragraph 3 (beginning: The American representative . . .)
Disagree. A contracting approach is being proposed that will allow the NATO AWACS Team to negotiate a fair and reasonable price for the PAR options with no impact to the program. However, the US BOD Representative will need to lift the confirmation placed on PAR award at the Dec 03 BOD meeting.

Revised

- h. Page ii, Paragraph 4 (beginning: Management Comments.)
Line 2: Change "...the American representative..." to "...the US representative...."

Revised

- i. Page ii, Paragraph 4 (beginning: Management Comments.)
Line 4: Change "...Electronic Systems Command..." to "...Electronic Systems Center...."

Revised

- j. Page 1, Paragraph 2 (beginning: The North Atlantic Treaty Organization . . .)
Last sentence: Change "...located in Brunssum..." to "...who normally meet in Brunssum...."

Revised

- k. Page 1, Paragraph 3 (beginning: NAPMO is headed . . .)
Line 5: Change "...also an American representative..." to "...also a US representative...."

- l. Page 1, Paragraph 4 (beginning: The NATO E-3 Mid-Term ...)
Line 7: "As the American representative on the NAPMO board of directors and as a procurement agent, the Deputy Assistant Secretary of the Air Force for Contracting has responsibility to ensure that our NATO allies are treated fairly." This sentence should be deleted because it is not accurate. The US Member of the Board of Directors is the Deputy Assistant Secretary of the Air Force for Contracting. The US Member of the Board of Directors represents the interests of the United States in the Board of Directors. The US Member of the Board of Directors is not the NAPMO's Agent. The NAPMO's Agent is SAF/AQI. SAF/AQI acts on behalf of NAPMO in the acquisition process as set forth in the Acquisition Agreement and Agency Arrangement between NAPMO and the USAF.

Revised

- m. Page 2, Paragraph 1 (beginning: Contract F19628-97-C-0112.)
Line 12: The statement: "The FAR applies to all contracts made by DoD activities in support of NATO cooperative projects." is accurate, but in this context the statement is misleading. The NMT contract is a direct commercial sale between NAPMO and Boeing pursuant to Section 38 of the AECA (codified at 22 U.S.C. 2278). The US Government is not a party to the contract.

Revised

- n. Page 4, Paragraph 1 (beginning: The senior level managers...)
Sentence 3: The report confuses the position of "former Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management" with the Chairman, NAPMO Board of Directors. While Mrs. Druyun filled both positions concurrently, she signed the applicable agreements and directions as "Chairman of the NAPMO Board of Directors."

- o. Page 4, Paragraph 1 (beginning: The senior level managers...)
2nd bullet: Delete. The integrated product team did perform an analysis of the statements of work.
- p. Page 4, Paragraph 2 (beginning: As a result...)
Line 2: Change "...an efficient, technically capable or economically responsible..." to "...an efficient or economically responsible..." The specification was modified appropriately.
- q. Page 5, Paragraph 1 (beginning: The NAPMO Board...)
In two places change "...American representative..." to "...US representative...."
- r. Page 5, Paragraph 1 (beginning: The NAPMO Board...)
Last Sentence: Change to: "The option for production and retrofit requires BOD approval."
- s. Page 5, Paragraph 3 (beginning: The Global Solution...)
Sentence 3: There was one PNM that supports the Global Solution. The EMD risk assessment that supported the ceiling increase has no standing by itself. Its relevance lies solely as a supporting document to one, non-severable element of the Global Solution.
- t. Page 5, Note 1
Change "...13 countries..." to "...13 NAPMO member nations...."
- u. Page 7, Paragraph 2 (beginning: We reviewed the documents...)
Sentence 2. Disagree. The more favorable PAR terms offset the additional litigation liabilities for EMD that were not included in the \$101.2M ceiling increase.
- v. Page 7, Paragraph 4 (beginning: Price Reasonableness Determination)
Sentence 1. The Price Negotiation Memorandum mentions that the price negotiated for the Global Solution is "fair and reasonable" three times. The ESC contracting officer reviewed and signed this document.
- w. Page 8, Paragraph 2 (beginning: The price negotiation memorandum...)
Sentence 1. The PNM was prepared by Mr. Querze, the price analyst. It was reviewed and signed by Mr. Fox, the contracting officer, and reviewed by Mr. McManus, a supervisory price analyst. Neither the ESC Staff Judge Advocate's Office nor the Chief of International Contracts approved or affirmed the PNM.
- x. Page 8, Paragraph 2 (beginning: The price negotiation memorandum...)
Sentence 2. The statement that the "Chief of AWACS International Contracts approved the price negotiation memorandum without the contracting officer's certification for fair and reasonable pricing..." is inaccurate on two accounts. First, the Chief did not "approve" the PNM, and it does state prices are fair and reasonable. Second, the statement that the Chief thought the former Principal Deputy Assistant Secretary was responsible for negotiating a fair and reasonable price is also incorrect. The Chief of AWACS International Contracts did not have this understanding.

Revised

Revised

Revised

Revised

Revised

Revised

- y. Page 8, Paragraph 4 (beginning: Because there were...)
Sentence 1. Disagree. The signed Price Negotiation Memorandum indicates in three places that the price was fair and reasonable.
- z. Page 8, Paragraph 4 (beginning: Because there were...)
Line 4: Change "...American representative..." to "...US representative...."
- aa. Page 8, Paragraph 5 (beginning: On January 30, 2004...)
Sentence 1. A post-award audit will be moot if Boeing is required to submit a new proposal for PAR.
- bb. Page 9, Paragraph 1 (beginning: knowingly submitted...)
Line 3: Change "...Command." to "...Center."
- cc. Page 9, Paragraph 2 (beginning: On September 26, 2002...)
Sentence 1. Recommend the beginning of the sentence be changed to read: "On September 26, 2002, the NAPMO BOD Chairman (Principal Deputy Assistant Secretary of the Air Force for Acquisition and Management), the NAPMA General Manager, and"
- dd. Page 9, Paragraph 4 (beginning: Fact-finding reviews...)
Sentence 3. The statement: "...problems that could possibly have been avoided with more robust fact finding and technical reviews" should be reexamined. There is no relationship between the ceiling price increase and the technical reviews.
- ee. Page 9, Paragraph 4 (beginning: Fact-finding reviews...)
Sentence 4. There is very little risk inherent in production and retrofit. Boeing has a long track record of performing large production and retrofit programs on budget and on schedule.
- ff. Page 10, Paragraph 1 (beginning: The U.S. Government cannot...)
Sentence 2. Disagree with recommendations. The PCO has already documented that the Global Solution is a fair and reasonable price. The US Government should lift the PAR confirmation contingent upon PAR being awarded as a UCA, which will be definitized in accordance with standard DoD procedures.
- gg. Page 15, Paragraph beginning: 2. NMT Production and...
Sentences 2 and 3. Change to: "The previous AWACS configuration will be removed from 16 NATO AWACS aircraft, and Mid-Term kits will be installed. One of the 17 NATO AWACS aircraft will have the kit retrofitted under the EMD portion of the contract for test purposes, and it will be refurbished under the PAR option."
- hh. Page 16, Paragraph 1
2nd bullet: P00068 did not add 24 months to EMD. This was done on a prior contract modification.

Revised

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Revised
Page 19

- ii. Page 21, Appendix E., Department of the Air Force
Change "...Electronic Systems Command*" to "...Electronic Systems Center*."

Revised
Page 22

Team Members

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

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