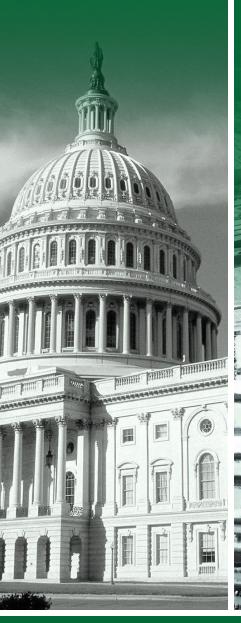
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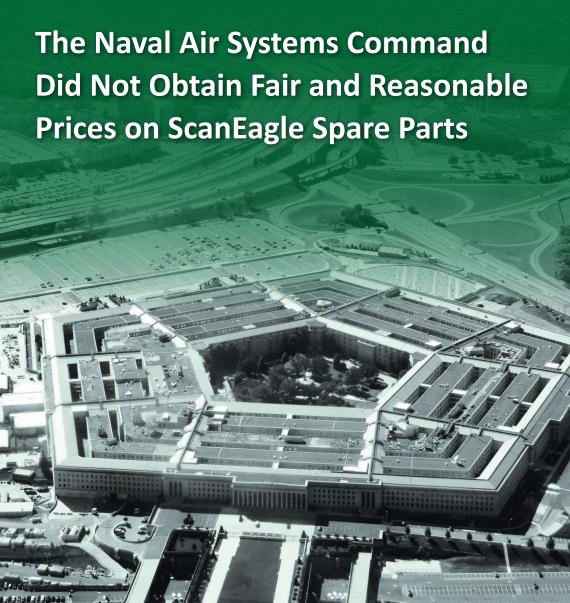


INSPECTOR GENERAL

U.S. Department of Defense

MAY 31, 2016





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Results in Brief

The Naval Air Systems Command Did Not Obtain Fair and Reasonable Prices on ScanEagle Spare Parts

May 31, 2016

Objective

We determined whether the Naval Air Systems Command purchased sole-source spare parts at fair and reasonable prices from Insitu, Inc. for the ScanEagle Unmanned Aircraft System.

Finding

Naval Air Systems Command contracting officials did not obtain fair and reasonable prices on sole-source spare parts. Although contracting officials received lower prices than the contractor proposed, contracting officials did not substantiate the analysis used to determine price reasonableness. In addition, contracting officials did not take advantage of quantity discounts when determining fair and reasonable prices for sole-source spare parts because program office personnel did not define spare-part requirements.

After analyzing our statistical sample, we determined that Naval Air Systems Command overpaid on 207 sole-source spare parts by \$2.1 million of the \$67.5 million spent. Additionally, Naval Air Systems Command will overpay on the remaining value of \$42.6 million for ScanEagle spare parts if contracting officials continue using the current negotiated spare part prices. Naval Air Systems Command may also overpay on future ScanEagle contracts if officials do not substantiate their analysis to determine price reasonableness or quantify the spare-part requirements.

Recommendations

- 1. We recommend that the Naval Air Systems Command, Assistant Commander for Contracts:
 - a. validate that contracting officials substantiate fair and reasonable price analysis performed in accordance with acquisition regulations on future contracts and
 - b. determine whether overpayments on spare parts were or will be made and pursue available options to recover the funds.
- 2. We also recommend that the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office define spare-part requirements for contracting officials' use in negotiating more advantageous prices on future contracts.

Management Comments and Our Response

As a result of management comments, we revised our finding and Recommendation 1.a; redirected Recommendations 1.a and 1.b to the Naval Air Systems Command, Assistant Commander for Contracts; and renumbered Recommendation 1.c as 2. Comments from the Deputy Assistant Secretary of the Navy (Acquisition and Procurement), responding for the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office, did not address the specifics of Recommendation 1.a, partially addressed the specifics of Recommendation 1.b, and addressed all specifics of Recommendation 2. We request that the Naval Air Systems Command, Assistant Commander for Contracts, provide comments in response to this report. Please see the Recommendations Table on the back of this page.

Recommendations Table

Management	Recommendations Requiring Comment	No Additional Comments Required
Naval Air Systems Command, Assistant Commander for Contracts	1.a and 1.b	
Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office		2

Please provide Management Comments by June 30, 2016.

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INSPECTOR GENERAL DEPARTMENT OF DEFENSE

4800 MARK CENTER DRIVE ALEXANDRIA. VIRGINIA 22350-1500

May 31, 2016

MEMORANDUM FOR NAVAL INSPECTOR GENERAL

SUBJECT: The Naval Air Systems Command Did Not Obtain Fair and Reasonable Prices on ScanEagle Spare Parts (Report No. DODIG-2016-093)

We are providing this report for review and comment. Naval Air Systems Command did not obtain fair and reasonable prices on sole-source spare parts. In addition, contracting officials did not take advantage of quantity discounts. After analyzing our statistical sample, we determined that Naval Air Systems Command overpaid for 207 sole-source spare parts by \$2.1 million of the \$67.5 million spent. Additionally, Naval Air Systems Command may pay too much on future purchases of spare parts if officials do not substantiate their analysis to determine fair and reasonable prices or do not define spare-part requirements prior to negotiating prices. We conducted this audit in accordance with generally accepted government auditing standards.

We considered management comments on a draft of this report when preparing the final report. DoD Instruction 7650.03 requires that recommendations be resolved promptly. As a result of comments from the Deputy Assistant Secretary of the Navy (Acquisition and Procurement), responding for the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office, we revised Recommendation 1.a and renumbered Recommendation 1.c as 2. In addition, we redirected Recommendations 1.a and 1.b to the Naval Air Systems Command, Assistant Commander for Contracts. The Deputy Assistant Secretary of the Navy (Acquisition and Procurement) did not address the specifics of Recommendation 1.a, partially addressed the specifics of Recommendation 1.b, and addressed all specifics of Recommendation 2. Therefore, we request additional comments on Recommendation 1.a and 1.b by June 30, 2016.

Please provide comments that conform to the requirements of DoD Instruction 7650.03. Please send a PDF file containing your comments to audcley@dodig.mil. Copies of your comments must have the actual signature of the authorizing official for your organization. We cannot accept the /Signed/ symbol in place of the actual signature. If you arrange to send classified comments electronically, you must send them over the SECRET Internet Protocol Router Network (SIPRNET).

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

> Jacqueline L. Wicecarver **Assistant Inspector General**

Acquisition and Sustainment Management

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Introduction

Objective

We determined whether the Naval Air Systems Command (NAVAIR) purchased sole-source spare parts at fair and reasonable prices from Insitu, Inc. for the ScanEagle Unmanned Aircraft System (ScanEagle). See Appendix A for a discussion of the scope and methodology, Appendix B for prior audit coverage related to the audit objective, and Appendix C for additional observations identified during the audit.

Background

NAVAIR

NAVAIR is headquartered in Patuxent River, Maryland, and provides full life-cycle support of naval aviation aircraft, weapons, and systems operated by sailors and marines. NAVAIR delivers products and support to operating forces including aircraft, avionics, air-launched weapons, electronic warfare systems, cruise missiles, unmanned aerial vehicles, launch and arresting gear, training equipment and facilities, and all other equipment related to Navy and Marine Corps air power.

The Navy and Marine Corps Small Tactical Unmanned Aircraft Systems Program Office is responsible for planning, procurement, and life-cycle support for multiple unmanned aircraft systems within NAVAIR, including the ScanEagle.

Insitu

Insitu, a subsidiary of The Boeing Company, is headquartered in Bingen, Washington. According to Insitu, it is a leader in the design, development, production, and operation of high-performance, cost-effective unmanned aerial systems, including the ScanEagle. The ScanEagle is a long-endurance unmanned aerial vehicle that provides intelligence, surveillance, and reconnaissance through imagery on land or at sea. U.S. and foreign militaries have flown the ScanEagle for more than 800,000 combat flight hours over land and sea. NAVAIR began procuring the ScanEagle from Insitu in 2009. See Figure 1 on the next page for a picture of the ScanEagle.



ScanEagle Contract

NAVAIR contracting officials awarded Insitu the fourth contract¹ for the ScanEagle on September 16, 2013. The 3-year firm-fixed-price, indefinite-delivery indefinite-quantity contract² had a maximum value of \$300 million with \$111.5 million available for noncommercial, sole-source spare parts.³ NAVAIR later issued two contract modifications⁴ that increased the number of available spare parts on the contract from 1,184 to 1,902 and adjusted some spare part prices from the original contract. NAVAIR spent \$68.9 million on spare parts as of July 16, 2015, with \$42.6 million remaining for additional spare part purchases.

Audit Sample of Insitu Spare Parts

NAVAIR purchased 977 of the 1,902 spare parts, valued at \$68.9 million, as of July 16, 2015. We decreased the population of 977 spare parts to 207 spare parts, valued at \$67.5 million, by eliminating 770 spare parts with total purchases valued under \$15,000 for each part. We selected a stratified statistical sample of 45 spare parts, valued at \$49.8 million, to determine whether NAVAIR was obtaining fair and reasonable prices. Appendix E discusses the methodology for calculating the population and stratification.

¹ The previous contracts were N00019-09-C-0050, N00019-10-C-0045, and N00019-11-D-0012.

² The Insitu contract is N00019-13-D-0016.

³ Noncommercial, sole-source spare parts are referred to as "spare parts" throughout the report.

⁴ The two modifications were P00005, dated June 23, 2014; and P00009, dated September 22, 2014.

Review of Internal Controls

DoD Instruction 5010.40⁵ requires DoD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. We identified internal control weaknesses for procuring spare parts at fair and reasonable prices. Specifically, contracting officials did not substantiate the analysis used to determine fair and reasonable prices for spare parts in accordance with the Federal Acquisition Regulation (FAR) and Defense Federal Acquisition Regulation Supplement (DFARS).⁶ In addition, program office personnel did not define spare-part requirements. We will provide a copy of the report to the senior official responsible for internal controls at NAVAIR.

⁵ DoD Instruction 5010.40, "Managers' Internal Control Program Procedures," May 30, 2013.

⁶ FAR 15.404-1, "Proposal Analysis Techniques," and DFARS 215.404-1, "Proposal Analysis Techniques."

Finding

Naval Air Systems Command Could Obtain Lower Prices for ScanEagle Spare Parts

Contracting officials did not obtain fair and reasonable prices on spare parts. Although contracting officials received prices lower than the contractor proposed, contracting officials did not substantiate the analysis used to determine price reasonableness. In addition, contracting officials did not take advantage of quantity discounts when determining fair and reasonable prices for spare parts. This occurred because program office personnel did not define spare-part requirements. After analyzing our statistical sample, we determined that NAVAIR overpaid on 207 spare parts by \$2.1 million.⁷ Additionally, NAVAIR will overpay on the remaining value of \$42.6 million for ScanEagle spare parts if contracting officials continue using the current negotiated spare part prices. NAVAIR may also overpay on future ScanEagle contracts if contracting officials do not substantiate their analysis to determine price reasonableness or quantify the spare-part requirements.

Contracting Officials Did Not Obtain Fair and Reasonable Prices

Contracting officials did not obtain fair and reasonable prices on spare parts. The

FAR8 requires contracting officials to use cost analysis9 when certified cost or pricing data are required for noncommercial spare parts. Contracting officials should also use price analysis¹⁰ to verify that the overall price offered is fair and reasonable.

Contracting officials did not obtain fair and reasonable prices on spare parts.

⁷ This number is rounded. The total spent on the 207 spare parts was \$67.5 million. See Appendix E for additional details of the sampling methodology.

⁸ FAR 15.404-1, "Proposal Analysis Techniques."

⁹ Cost analysis is the review and evaluation of any separate cost elements and profit or fee in a contractor's proposal, as needed, to determine fair and reasonable price and the application of judgment to determine how well the proposed costs represent what the cost of the contract should be.

¹⁰ Price analysis is the process of examining and evaluating a proposed price without evaluating its separate cost elements and proposed profit.

Contracting Officials Did Not Substantiate the Analysis Used to Determine Fair and Reasonable Prices

Contracting officials evaluated the direct and indirect rates¹¹ and verified that the total spare parts contract line item value was fair and reasonable for the base contract and each of the contract modifications through comprehensive cost analysis. Specifically, the contract specialists compared Insitu's proposed rates to the Defense Contract Audit Agency audited rates.¹² The contract specialists also reviewed prior purchase orders and quotes to validate Insitu's proposed material costs for a sample of parts. In addition, the contract specialists performed price analysis on the base contract and two modifications. For example, the contract specialist compared historical prices paid by the Government for identical spare parts to the proposed base contract prices.

Contracting officials performed cost and price analysis but did not substantiate the analysis used to determine the reasonableness of individual spare part prices in the base contract and two modifications. Before negotiations on the base contract, the contract specialist planned to use both cost and price analysis to determine fair and reasonable prices for individual spare parts. In addition, the contract specialist planned to reduce Insitu's proposed prices for individual spare parts by a specific percentage. However, according to contract documentation, the contract specialist changed the methodology during negotiations and agreed to apply the approach used for the major system components on the contract. Therefore, the contract specialists analyzed the total spare parts contract value and did not validate individual spare parts prices proposed by Insitu in the base contract and two modifications.

We used the cost analysis template provided by the NAVAIR contracting officials and performed analysis for 45 spare parts, valued at \$49.8 million.

Specifically, we obtained Insitu's material and labor costs, applied Defense Contract Audit Agency audited direct and indirect rates, and applied a weighted average to each contract year. We compared our calculated price to the purchase price and determined that NAVAIR overpaid \$1.9 million on 39 spare parts. In addition, we determined that NAVAIR obtained fair and reasonable prices on two spare

NAVAIR overpaid \$1.9 million on 39 spare parts.

¹¹ Direct and indirect rates include material and labor costs, material overhead, and general and administrative costs.

Contracting officials used audited rates from the Defense Contract Audit Agency because the Government did not have a forward pricing rate agreement with Insitu. A forward pricing rate agreement is a written agreement between a contractor and the Government to make certain rates available during a specific period for use in pricing contracts or modifications.

DFARS 215.404-1, "Proposal Analysis Techniques," establishes an analysis process for spare parts based on a selected sampling of line items.

parts and underpaid \$178,787 on four spare parts. This resulted in a net overpayment of \$1.7 million.¹⁴ The NAVAIR, Assistant Commander for Contracts should validate that contracting officials substantiate fair and reasonable price analysis performed in accordance with FAR 15.404-1 and DFARS 215.404-1.¹⁵

Table 1. Summary	of NAVAIR Overpavm	ents on the ScanEagle Contract

Contract Price List	Number of Purchased Parts Sampled	Total Procurement Value	Total IG Calculated Procurement Value	Net Overpayment	Percentage of Overpayments to NAVAIR Procurement Value
Original Contract	33	\$34,882,473	\$33,560,354	\$1,322,119	3.8
Modification 1	12	11,954,596	11,747,403	207,193	1.7
Modification 2	4	2,947,307	2,782,644	164,663	5.6
Total	49*	\$49,784,376	\$48,090,401	\$1,693,975	3.4

^{*} The number of parts purchased does not equal our sample of 45. NAVAIR purchased four parts using both the original contract price and a modified contract price.

After analyzing our sample, we determined that NAVAIR overpaid by \$2.1 million of the \$67.5 million spent on 207 spare parts. NAVAIR will overpay on the \$42.6 million remaining and available on the spare parts contract, if contracting officials continue using the negotiated spare part prices or do not substantiate the reasonableness of the spare parts prices in the contract. NAVAIR should determine whether overpayments on spare parts were or will be made and pursue available options to recover the funds, including voluntary refunds in accordance with DFARS Procedures, Guidance, and Information 242.71.¹⁶

Contracting Officials Requested Unit Prices Without Considering Quantity Discounts

Contracting officials did not take advantage of quantity discounts when determining fair and reasonable prices for spare parts. The FAR¹⁷ requires agencies to procure supplies in a quantity with unit and total costs that are most advantageous to the Government, where practicable. However, contracting officials did not know the quantity of each spare part needed and requested that Insitu price the spare parts as if NAVAIR was purchasing only one of each spare part. Therefore, NAVAIR did not always benefit from quantity discounts that Insitu received from its vendors.

 $^{^{14}}$ See Table 1 for summary results and Appendixes A and D for the methodology and detailed results of our analysis of overpayments on the sample parts.

¹⁵ FAR 15.404-1, "Proposal Analysis Techniques," and DFARS 215.404-1, "Proposal Analysis Techniques."

¹⁶ DFARS Procedures, Guidance, and Information 242.71, "Voluntary Refunds." Voluntary refunds may be requested during or after contract performance.

 $^{^{\}rm 17}~$ FAR 7.2, "Planning for the Purchase of Supplies in Economic Quantities."

(FOUO) For example, NAVAIR did not receive material cost discounts when purchasing 126 video switches. The contract specialist determined the price was fair and reasonable using the material unit cost of per part, which was based on purchasing one video switch. Insitu purchased 35 video switches valued at each from its vendor. However, Insitu received a quantity discount by purchasing an additional 65 video switches with a lower cost of we applied the direct and indirect rates to the lower material cost and determined that NAVAIR could have saved \$38,935 on 65 of the 126 video switches if the lower material cost was used to determine the price.

(FOUO) In addition, with clearly defined requirements from NAVAIR, Insitu could have received vendor quantity discounts to pass onto NAVAIR. For example,

NAVAIR did not take advantage of material cost discounts when purchasing slice assemblies. The contract specialist determined the price was fair and reasonable using the material cost of per part, which was based on purchasing one slice assembly. Insitu's vendor agreement included a material price of for quantities between 75 and 99 parts. From September 16, 2013, through August 31, 2015, Insitu purchased 86 slice assemblies. Insitu could have received

the quantity discount for those purchases and passed the

NAVAIR
could have
saved \$279,400 for
the 100 slice assemblies
if program office
personnel had used
historical information
to define
requirements.

discount onto NAVAIR. As a result, NAVAIR could have saved \$279,400 for the 100 slice assemblies if program office personnel had used historical information to define requirements.

Program Office Did Not Define Requirements

Program office personnel did not define spare-part requirements. According to contracting officials, they requested Insitu price each spare part as if only one of each spare part would be purchased because program office personnel did not adequately forecast requirements. Program office personnel stated that changes in strategic goals and quickly changing operations impacted the demand for parts. However, NAVAIR has been procuring ScanEagle spare parts for 7 years and a portion of the 800,000 combat flight hours were in support of various U.S. military missions. Program office personnel could have used this historical data to identify which spare parts were bought frequently and in large quantities. Program office personnel should define spare-part requirements for contracting officials to use in negotiating more advantageous prices on future contracts.

 $^{^{18}}$ Insitu used 14 slice assemblies from existing inventory to fulfil the NAVAIR order.

Naval Air Systems Command Could Improve Prices

After analyzing our sample, we determined that NAVAIR overpaid by \$2.1 million¹⁹ of the \$67.5 million spent on 207 spare parts. Additionally, NAVAIR will continue to overpay on the ScanEagle contract, which has \$42.6 million remaining for spare parts, if contracting officials continue using the current negotiated spare part prices or do not substantiate the analysis when pricing additional spare parts. NAVAIR contracting officials could also prevent overpayments on future ScanEagle contracts by analyzing both cost and pricing data provided by the contractor for individual spare parts prices instead of at the total spare parts contract value. In addition, NAVAIR may have paid too much for spare parts by having Insitu provide pricing as if it was purchasing one of each part. If program office personnel use the historical procurement data, they could develop realistic spare-part requirements for future program needs. NAVAIR could prevent overpaying for spare parts on future contracts by defining requirements based on historical data and taking advantage of quantity discounts, when available.

Management Comments on the Finding and Our Response

The Deputy Assistant Secretary of the Navy (Acquisition and Procurement) [DASN(AP)], responding for the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office, disagreed that NAVAIR contracting officials did not receive fair and reasonable prices. The DASN(AP) stated that NAVAIR used available analysis techniques in performing detailed cost and price analysis and used that analysis to determine a fair and reasonable price. The DASN(AP) also stated that the contracting officer reached a settlement on a "bottom-line" basis and applied a decrement factor²⁰ across all spare parts to establish final unit prices. The DASN(AP) further stated that the FAR²¹ allows the Government to use various cost and price analysis techniques to ensure a fair and reasonable price. The DASN(AP) concluded that using a different methodology to obtain an overall lower price does not mean the contracting officer did not comply with the FAR and DFARS.

Our Response

We agree that the FAR permits using various methods to determine fair and reasonable prices. We also agree contracting officials performed cost and price analysis. The pre-negotiation memorandum documents this price analysis for

¹⁹ See Appendix E for additional details of the statistical sampling methodology.

²⁰ A decrement factor is a percentage reduction applied to a contractor's proposed price.

²¹ FAR 15.404-1, "Proposal Analysis Techniques."

118 individual spare parts. The pre-negotiation memorandum states that the contract specialist would apply a decrement factor to all parts in the contractor's commercial catalog as a basis for negotiations. The post-negotiation memorandum then states that before concluding negotiations, the contract specialist and contractor personnel agreed that the spare parts would be analyzed using the same approach as the major system components material. It states that prior purchase orders, prior negotiated costs of identical or similar items, and inflation adjustment were used to determine fair and reasonable prices.

During our audit, we requested that the contracting officer provide documentation to support their price reasonableness analysis. The contract specialist provided the template used to determine price reasonableness of the spare parts included on one of the modifications. We used the template to calculate prices for individual spare parts on the base contract and two modifications and could not recalculate the purchase prices. We provided examples of our analysis to the contracting officer and asked for an explanation of the price differences. The contracting officer reviewed and validated the methodology but could not explain the differences.

On April 28, 2016, over 10 months since the start of the audit, the NAVAIR Contracts Deputy Department Head provided a spreadsheet from the electronic contract files that showed the negotiated prices were reduced from the contractor's original proposed prices. He could not explain why contracting officials had not previously provided the spreadsheet before the draft report was issued, even though the audit team requested this information numerous times during the audit and were specifically told by contracting officials that the information did not exist.

The NAVAIR Contracts Deputy Department Head stated that he added a column to the original spreadsheet that showed a 2.5 percent difference between Insitu's proposed prices and the negotiated contract prices. However, the spreadsheet did not include any analysis to support how the 2.5 percent price decrease resulted in fair and reasonable prices. In addition, the contract file did not include documentation to substantiate how the contracting officials developed the 2.5 percent reduction. Therefore, contracting officials could not support the methodology used to determine fair and reasonable prices on individual spare parts.

As a result of DASN(AP) comments and receiving additional information that was not provided during the audit, we revised the statement that "contracting officials did not use available analysis results" to "contracting officials did not substantiate the analysis used" to determine price reasonableness. We made minor changes throughout the report to reflect these changes.

Recommendations, Management Comments, and Our Response

Revised and Redirected Recommendations

As a result of the DASN(AP) comments to a draft of this report, we revised Recommendation 1.a to clarify the actions NAVAIR should take to meet FAR and DFARS requirements. In addition, we redirected Recommendations 1.a and 1.b from the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office to the NAVAIR, Assistant Commander for Contracts, who has the authority to implement the recommendations, which required us to renumber Recommendation 1.c as 2.

Recommendation 1

We recommend that the Naval Air Systems Command, Assistant Commander for Contracts:

a. Establish controls to validate that contracting officials substantiate the fair and reasonable price analysis performed in accordance with Federal Acquisition Regulation 15.404-1, "Proposal Analysis Techniques," and Defense Federal Acquisition Regulation Supplement 215.404-1, "Proposal Analysis Techniques," on future contracts.

Deputy Assistant Secretary of the Navy (Acquisition and Procurement) Comments

The DASN(AP), responding for the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office, disagreed with our original recommendation, stating that the NAVAIR, Assistant Commander for Contracts, currently has policy requiring contracting officials to use FAR 15.404-1 and DFARS 215.404-1²² when establishing fair and reasonable prices and no additional controls are needed.

Our Response

Comments from the DASN(AP) did not address the specifics of the revised recommendation. The DASN(AP) official comments included NAVAIR policy, which we did not include in this report because of the size. We agree that NAVAIR has a policy requiring contracting officials to follow FAR 15.404-1 and DFARS 215.404-1. However, NAVAIR did not have effective controls to validate if contracting officials substantiated the proposal analysis technique used to determine fair

²² FAR 15.404-1, "Proposal Analysis Techniques," and DFARS 215.404-1, "Proposal Analysis Techniques."

and reasonable prices. Contracting officials stated that they performed analysis to determine a decrement factor to apply to Insitu's proposed prices. In addition, after 10 months of performing the audit, contracting officials provided the audit team a spreadsheet demonstrating that the spare parts contract prices were 2.5 percent lower than Insitu's proposed prices. However, contracting officials could not provide the analysis justifying that the 2.5 percent decrease resulted in fair and reasonable prices. We request that the NAVAIR, Assistant Commander for Contracts provide comments on the revised recommendation.

b. Determine whether overpayments on spare parts for the ScanEagle contract were or will be made and pursue available options to recover the funds, including voluntary refunds, in accordance with Defense Federal Acquisition Regulation Supplement Procedures, Guidance, and Information 242.71, "Voluntary Refunds."

Deputy Assistant Secretary of the Navy (Acquisition and **Procurement)** Comments

The DASN(AP), responding for the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office, partially agreed, stating that a contracting officer was responsible for the recommendation, not the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office. The DASN(AP) stated that the NAVAIR, Assistant Commander for Contracts, will ensure that the contracting officer reviews the previous delivery orders to determine if incorrect prices were used and seek corrections if errors are identified.

Our Response

Comments from the DASN(AP) partially addressed the recommendation. We agree that the NAVAIR, Assistant Commander for Contracts should ensure that the contracting officer reviews the accuracy of previous purchase order prices and pursues available options to recover overpayments. However, NAVAIR did not obtain fair and reasonable prices. Specifically, contracting officials could not provide analysis justifying that a 2.5 percent price decrease resulted in fair and reasonable prices. In addition, we identified that NAVAIR overpaid \$2.1 million of the \$67.5 million spent on the spare parts contract and will continue to overpay on the \$42.6 million remaining and available for spare parts. The contracting officer should review the spare parts pricing methodology to determine if NAVAIR obtained fair and reasonable prices, reassess whether overpayments were or will be made, and pursue available options to recover those funds. We request that the NAVAIR, Assistant Commander for Contracts, provide additional comments to the final report.

Recommendation 2

We recommend that the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office define spare-part requirements for the ScanEagle and provide contracting officials the requirements to use in negotiating more advantageous prices for the Navy on future contracts.

Deputy Assistant Secretary of the Navy (Acquisition and **Procurement)** Comments

The DASN(AP), responding for the Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office, agreed, stating that NAVAIR will establish quantity discounts for the follow-on contract if data are available. NAVAIR will use those quantities to negotiate future modifications and contracts. A follow-on contract is scheduled for next fiscal year.

Our Response

Comments from DASN(AP) addressed all specifics of the recommendation, and no further comments are required.

Appendix A

Scope and Methodology

We conducted this performance audit from June 2015 through March 2016 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

To determine whether NAVAIR purchased spare parts at fair and reasonable prices, we obtained all NAVAIR procurements made through the original contract and its two contract modifications²³ between September 16, 2013, and July 16, 2015. NAVAIR purchased 977 unique spare parts, valued at \$68.9 million. We reviewed the contracting official's price reasonableness determinations and performed a fair and reasonable price analysis for 45 statistically sampled spare parts, valued at \$49.8 million.

In addition, we interviewed personnel from NAVAIR, Defense Contract Audit Agency, Defense Contract Management Agency, and Insitu to identify their roles and responsibilities related to pricing the contract and the two contract modifications. We met with contractor representatives, shared portions of the report, considered their comments, and made changes to the report where appropriate. We reviewed payment vouchers from the Defense Finance and Accounting Service. We also reviewed applicable regulations on contract pricing, including:

- FAR Part 7.202, "Planning for the Purchase of Supplies in Economic Quantities;"
- FAR 15.404-1, "Proposal Analysis Techniques;"
- DFARS 215.404-1, "Proposal Analysis Techniques;" and
- DFARS Procedures, Guidance, and Information 242.71, "Voluntary Refunds."

²³ The contract number is N00019-13-D-0016 and the modifications are dated June 23, 2014, and September 22, 2014.

Review of Naval Air Systems Command Price Reasonableness Determinations

We reviewed NAVAIR's contract files to determine whether the contracting officer obtained sufficient documentation for determining fair and reasonable prices for 45 spare parts. Specifically, we reviewed the pre- and post-negotiation memorandums for the original contract and its two contract modifications to understand the processes contracting officials used to determine whether prices were fair and reasonable. We also reviewed documentation, such as Insitu's purchase orders and invoices that NAVAIR obtained for its price reasonableness determinations.

Fair and Reasonable Price Analysis

We analyzed 45 spare parts to determine whether NAVAIR established fair and reasonable prices. We obtained Insitu's material costs from its purchase orders and supplier invoices and escalated these costs using the applicable Global Insight's²⁴ aerospace products and parts rates. According to contracting officials, they applied the direct and indirect rates approved in previous Defense Contract Audit Agency reports on other Insitu contracts with similar spare parts because a forward pricing rate agreement did not exist between Insitu and the Government. Therefore, we applied the same rates and the negotiated profit rate to Insitu's escalated material cost when calculating fair and reasonable prices. We compared our fair and reasonable price to the price NAVAIR paid for the spare parts to determine an over or underpayment per part. We multiplied that amount to the quantity purchased to calculate the total over or underpayment.

Use of Computer-Processed Data

We relied on computer-processed procurement data obtained from the program office and data from the Electronic Document Access database. The program office maintained an Excel spreadsheet that contained a worksheet for each delivery order. Each worksheet included each spare part purchased, the number of spare parts purchased, and the price. We compared the information contained in the Excel spreadsheet to the delivery orders in the Electronic Document Access database and the contract files to ensure the data were accurate. Based on our comparisons, we determined that the data were sufficiently reliable for the purposes of this report.

 $^{^{24}}$ Global Insight is a commercial forecasting firm commonly used by DoD for escalation rates.

Use of Technical Assistance

The DoD OIG Quantitative Methods Division (QMD) assisted us during the audit. Specifically, QMD designed a stratified statistical sample of spare parts purchased by NAVAIR on the original contract and its two contract modifications from September 16, 2013, through July 16, 2015. See Appendix E for a detailed discussion of the sampling methodology.

Appendix B

Prior Coverage

During the last 5 years, the DoD Inspector General issued 18 reports discussing spare-part pricing. Unrestricted DoD Inspector General reports can be accessed at http://www.dodig.mil/pubs/index.cfm.

DoD Inspector General

DODIG-2016-047, "Defense Logistics Agency Did Not Appropriately Determine Fair and Reasonable Prices for F108 Engine Sole-Source Commercial Parts," February 16, 2016

DODIG-2016-023, "Improvements Needed in the Defense Logistics Agency's Evaluation of Fair and Reasonable Prices for C-130 Aircraft Spare Parts," November 16, 2015

DODIG-2015-153, "Defense Logistics Agency Aviation Generally Purchased Sole-Source Spare Parts From the General Electric Company at Fair and Reasonable Prices, but Improvements Could Be Made," July 24, 2015

DODIG-2015-137, "Improvements Needed on DoD Procurements from Robertson Fuel Systems," June 25, 2015

DODIG-2015-124, "Improvements Needed for Awarding Service Contracts at Naval Special Warfare Command," May 15, 2015

DODIG-2015-120, "Defense Logistics Agency Did Not Obtain Fair and Reasonable Prices From Meggitt Aircraft Braking Systems for Sole-Source Commercial Spare Parts," May 8, 2015

DODIG-2015-103, "Summary of DoD Office of Inspector General Spare-Parts Pricing Audits: Additional Guidance is Needed," March 31, 2015

DODIG-2015-058, "U.S. Air Force May Be Paying Too Much for F117 Engine Sustainment," December 22, 2014

DODIG-2015-053, "Naval Supply Systems Command Needs to Improve Cost Effectiveness of Purchases for the Phalanx Close-In Weapon System," December 19, 2014

DODIG-2014-110, "Ontic Engineering and Manufacturing Overcharged the Defense Logistics Agency for Sole-Source Spare Parts," September 15, 2014 DODIG-2014-088, "Defense Logistics Agency Aviation Potentially Overpaid Bell Helicopter for Sole-Source Commercial Spare Parts," July 3, 2014

DODIG-2014-054, "Defense Logistics Agency Land and Maritime Paid Too Much for High Mobility Multipurpose Wheeled Vehicle Repair Parts," April 4, 2014

DODIG-2014-038, "Air Force Life Cycle Management Center Could Not Identify Actual Cost of F119 Engine Spare Parts Purchased from Pratt and Whitney," February 10, 2014

DODIG-2014-020, "U.S. Army Contracting Command Did Not Obtain Fair and Reasonable Prices for Communications Equipment," December 5, 2013

DODIG-2013-090, "Improved Guidance Needed to Obtain Fair and Reasonable Prices for Sole-Source Spare Parts Procured By the Defense Logistics Agency From the Boeing Company," June 7, 2013

D-2011-104, "Pricing and Escalation Issues Weaken the Effectiveness of the Army Contract with Sikorsky to Support the Corpus Christi Army Depot," September 8, 2011

D-2011-061, "Excess Inventory and Contract Pricing Problems Jeopardize the Army Contract with Boeing to Support the Corpus Christi Army Depot," May 3, 2011

D-2011-042, "Lean Six Sigma Project - Defense Logistics Agency/Honeywell Long-Term Contract Model Using One-Pass Pricing for Sole-Source Spare Parts," February 18, 2011

Appendix C

Incorrect Prices Applied to Delivery Orders

(FOUO) During our review of ScanEagle procurements, we identified that NAVAIR was paying incorrect prices for spare parts. Specifically, we compared the price lists from the original contract and the two contract modifications and identified that prices changed on 12 spare parts. We identified that NAVAIR overpaid on 4 of 12 spare parts²⁵ on two delivery orders. For example, the pan-tilt actuator price on the original contract was On June 23, 2014, contracting



officials modified the contract, which decreased the price However, NAVAIR purchased 10 actuators in August 2014, and 20 actuators in September 2014, at the original price of resulting in an overpayment to Insitu of \$7,080.

We reviewed payment vouchers from the Defense Finance and Accounting Service and determined that NAVAIR overpaid Insitu a total of \$12,240 for four spare parts. As a result of our audit, contracting officials are

taking corrective action by reviewing the purchase orders for all 12 spare parts. In addition, contracting officials plan to improve the procedures for comparing the contract price to the delivery order prices. The contracting officials plan to complete these actions by April 30, 2016.

 $^{^{\}rm 25}$ $\,$ The four parts were the pan-tilt actuator, LCD monitor, front brakes, and rear brakes.

Appendix D

Analysis of Insitu Spare Parts

Table 2 includes the results of our analysis for 45 spare parts. We identified that NAVAIR overpaid on 39 of the 45 spare parts and obtained fair and reasonable prices or underpaid on the remaining 6 spare parts.

(FOUO) Table 2. Analysis for 45 Spare Parts

(FOUO) Part #	Quantity Purchased Multiplied By Procurement Price	Quantity Purchased Multiplied By IG Calculated Fair and Reasonable Price	Total Overpayment/ Underpayment
	\$7,788,312	\$7,494,246	\$294,066
	1,389,641	1,135,671	253,970
	4,682,570	4,522,812	159,758
	3,784,300	3,641,989	142,311
	2,755,032	2,651,244	103,788
	2,113,180	2,033,450	79,730
	2,009,168	1,933,344	75,824
	1,799,306	1,723,500	75,806
	1,942,396	1,869,072	73,324
	1,553,220	1,494,540	58,680
	1,521,476	1,464,226	57,250
	1,498,946	1,442,342	56,604
	2,208,220	2,158,030	50,190
	1,322,500	1,272,625	49,875
	636,372	596,552	39,820
	1,059,089	1,019,466	39,623
	836,352	796,986	39,366
	2,110,250	2,084,490	25,760
	617,200	594,000	23,200
	590,007	567,853	22,154
	428,668	412,486	16,182
	358,986	345,450	13,536
	336,248	323,532	12,716
			(FOUO)

(FOUO) Table 2. Analysis for 45 Spare Parts (cont'd)

(FOUO)			
Part #	Quantity Purchased Multiplied By Procurement Price	Quantity Purchased Multiplied By IG Calculated Fair and Reasonable Price	Total Overpayment/ Underpayment
	367,488	354,950	12,538
	327,116	314,820	12,296
	320,661	308,556	12,105
	314,418	303,108	11,310
	857,500	846,900	10,600
	279,060	268,536	10,524
	198,768	190,896	7,872
	147,679	140,891	6,788
	157,320	151,335	5,985
	131,610	126,485	5,125
	118,008	113,538	4,470
	99,040	95,320	3,720
	63,860	61,455	2,405
	62,083	60,349	1,734
	30,566	29,529	1,037
	18,966	18,246	720
	16,100	16,100	0
	25,308	25,308	0
	275,328	276,048	(720)
	427,572	471,258	(43,686)
	854,766	899,667	(44,901)
	1,349,720	1,439,200	(89,480)
Total	\$49,784,376	\$48,090,401	\$1,693,975 (FOUO)

Note: Figures in parenthesis are negative amounts.

Appendix E

Sampling Methodology

Sampling Objective

We selected a statistical sample of spare parts from the population, as described below, for review to determine whether the prices negotiated for those parts were fair and reasonable.

Spare Part Population

We obtained a list of NAVAIR spare parts purchases from September 16, 2013, through July 16, 2015, which included 977 spare parts, valued at \$68.9 million. We included only NAVAIR purchases that exceeded \$15,000 per part, which totaled 207 spare parts, valued at \$67.5 million. We considered the 207 spare parts as our population.

Sample Design

QMD designed a stratified sampling plan by dividing the population into four strata (sections) based on total purchase price for each part. QMD then used Microsoft Excel's random function to select the sample items within each stratum. See Table 3 for the number of spare parts in the statistical sample and population in each stratum.

Table 3. Strata Used to Select Statistical Sample of Spare Parts

	Stratum Sample Size (Parts)	Sample Total Value	Stratum Population Size (Parts)	Population Total Value
Greater than or equal to \$1 million	17	\$40,887,326	17	\$40,887,326
Greater than or equal to \$250,000 and less than \$1 million	16	7,827,742	32	16,024,914
Greater than or equal to \$60,000 and less than \$250,000	8	978,368	56	7,461,948
Greater than or equal to \$15,000 and less than \$60,000	4	90,940	102	3,092,169
Total	45	\$49,784,376	207	\$67,466,357

Statistical Analysis and Interpretation

Based on the sample results, Table 4 shows the potential overpayment as of July 16, 2015. To interpret the projection listed below, we are 90 percent confident that NAVAIR overpaid for spare parts between \$1.9 million and \$2.3 million, with the point estimate being \$2.1 million.

Table 4. Statistical Projection

Potential Overpayment	Potential Overpayment (Point	Potential Overpayment
(Lower Bound)	Estimate)	(Upper Bound)
\$1,882,499	\$2,112,656	

Management Comments

Department of the Navy



DEPARTMENT OF THE NAVY OFFICE OF THE ASSISTANT SECRETARY
(RESEARCH, DEVELOPMENT AND ACQUISITION)
1000 NAVY PENTAGON WASHINGTON DC 20350-1000

APR 2 0 2016

MEMORANDUM FOR PROGRAM DIRECTOR, ACQUISITION, PARTS, AND INVENTORY, DEPARTMENT OF DEFENSE INSPECTOR GENERAL

SUBJECT: The Naval Air Systems Command Did Not Obtain Fair and Reasonable Prices on ScanEagle Spare Parts, Draft Audit Report (Project No. D2015-D000AT-0210.000)

The attached comments are provided by the Department of the Navy in response to your draft audit report dated March 11, 2016.

She can be reached at My point of contact for this action is Elliott B. Branch

Elliott B. Branch

Deputy Assistant Secretary of the Navy (Acquisition and Procurement)

Attachments: As stated

Department of the Navy (cont'd)



DEPARTMENT OF THE NAVY
NAVAL AIR SYSTEMS COMMAND
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PATUXENT RIVER, MARYLAND, 20670-1547

7502 Ser AIR-00G4/038

APR 0 7 2016

From: Commander, Naval Air Systems Command

To: Assistant Secretary of the Navy (Research, Development and Acquisition) DASN

Acquisition and Procurement

Subj: DODIG DRAFT REPORT, "THE NAVAL AIR SYSTEMS COMMAND DID NOT

OBTAIN FAIR AND REASONABLE PRICES ON SCANEAGLE SPARE PARTS"

(PROJECT NO. D2015-D000AT-0210.000)

Ref: (a) DCN 2016UGENERAL-004643b

Encl: (1) Naval Air Systems Command Response to Subject Draft Report

1. In accordance with reference (a), enclosure (1) is hereby submitted.

2. Please refer questions to

For B. A. SHEVCHUK Inspector General

Copy to: AIR-2.0

Department of the Navy (cont'd)

NAVAL AIR SYSTEMS COMMAND RESPONSE TO DODIG DRAFT REPORT #D2015-D000AT-0210.000, "THE NAVAL AIR SYSTEMS COMMAND DID NOT OBTAIN FAIR AND REASONABLE PRICES ON SCANEAGLE SPARE PARTS", DATED MARCH 11, 2016

Finding: Naval Air Systems Command Could Obtain Lower Prices for ScanEagle Spare Parts

Contracting officials did not obtain fair and reasonable prices on spare parts. This occurred because contracting officials did not use available analysis results to determine price reasonableness. In addition, contracting officials did not take advantage of quantity discounts when determining fair and reasonable prices for spare parts. This occurred because program office personnel did not define spare-part requirements. After analyzing our statistical sample, we determined that NAVAIR overpaid on 207 spare parts by \$2.1 million. Additionally, NAVAIR will overpay on the remaining value of \$42.6 million for ScanEagle spare parts if contracting officials continue using the negotiated spare part prices or do not use the analysis results when pricing additional spare parts. NAVAIR may also overpay on future ScanEagle contracts if contracting officials do not use their analysis to determine prices reasonableness or quantify the spare-part requirements.

NAVAIR RESPONSE: NAVAIR does not concur that "Contracting Officials did not obtain fair and reasonable prices on spare parts. This occurred because contracting officials did not use available analysis results to determine price reasonableness." As documented in our pre and post BCMs, as well as recounted in the report, NAVAIR used "available analysis" techniques in performing both a detailed cost and price analysis. The contracting officer used cost and price analysis, as documented in the pre-negotiation business clearance, to determine a fair and reasonable price objective. However, the contracting officer was not able to sustain the position during negotiations, and settlement was reached on a bottom-line basis. For the post-negotiation business clearance, a decrement factor based on the achieved savings, as compared to the proposal was allocated across the parts in reaching the final unit prices. Although the unit prices might vary from the method utilized by the DoDIG, the total savings captured by the negotiation was allocated across all 1902 spare parts that were priced. The price analysis, as documented in the post-negotiation clearance, determined that the final negotiated price obtained was still fair and reasonable.

FAR 15.404-1(b)(2) provides "The Government may use various price analysis techniques and procedures to ensure a fair and reasonable price" and thereafter lists examples of various techniques. There is similar language with respect to cost analysis techniques in FAR 15.404-1(c). Cost and price analysis is not a precise/rigid process that yields a single "correct" value. Rather, cost and price analysis involves the exercise of judgment. Application of a different analytical methodology to reach an overall lower price, does not make the Contracting Officer's exercise of judgment to achieve the NAVAIR overall settlement position non-compliant with FAR/DFAR.

Recommendation 1.a: Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office establish controls to validate that contracting officials apply

Enclosure (1)

Final Report Reference

Revised and redirected

Department of the Navy (cont'd)

Federal Acquisition Regulation 15.404-1, "Proposal Analysis Techniques," and Defense Federal Acquisition Regulation Supplement 215.404-1, "Proposal Analysis Techniques," when performing price reasonableness analysis on future contracts.

NAVAIR RESPONSE: NAVAIR does not concur. AIR-2.0 establishes contract policy and procedures for NAVAIR. AIR-2.0 currently has policy requiring contracting officers to utilize FAR 15.404-1 and DFARS 215.404-1 proposal analysis techniques in establishing fair and reasonable prices (see Attachments A and B). NAVAIR does not believe any additional controls are required.

ESTIMATED COMPLETION DATE: N/A

RECOMMENDATION 1.b: Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office determine whether overpayments on spare parts for the ScanEagle contract were or will be made and pursue available options to recover the funds, including voluntary refunds, in accordance with Defense Federal Acquisition Regulation Supplement Procedures, Guidance, and Information 242.71, "Voluntary Refunds."

NAVAIR RESPONSE: NAVAIR partially concurs. Actions pursuant to DFAR 242.71 and DFAR PGI 242.7100 are to be performed by a Contracting Officer, not a Program Manager. AIR-2.0 will ensure that the contracting officer reviews previous delivery orders to verify if incorrect prices were utilized in the delivery orders, and seek corrections if there are determined to be errors.

ESTIMATED COMPLETION DATE: Reviews of previous delivery orders will be completed by 30 July 2016 to determine if corrections are needed.

RECOMMENDATION 1.c: Program Manager, Navy and Marine Corps Small Tactical Unmanned Aircraft System Program Office define spare-part requirements for the ScanEagle and provide contracting officials the requirements to use in negotiating more advantageous prices for the Navy on future contracts.

NAVAIR RESPONSE: NAVAIR concurs. If available data allows for establishing pricing based on quantity discounts under the indefinite quantity/indefinite delivery contract, then those quantities will be negotiated in follow on modifications or successor contracts.

ESTIMATED COMPLETION DATE: FY17 or subsequent. A follow-on effort is not scheduled to take place this FY.

Final Report Reference

Attachments A and B were omitted because of length

Redirected

Renumbered as **Recommendation 2**

Enclosure (1)

Acronyms and Abbreviations

DASN(AP) Deputy Assistant Secretary of the Navy (Acquisition and Procurement)

DFARS Defense Federal Acquisition Regulation Supplement

FAR Federal Acquisition Regulation

NAVAIR Naval Air Systems Command

QMD Quantitative Methods Division



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