

~~FOR OFFICIAL USE ONLY~~

Report No. DODIG-2012-004

November 3, 2011

Inspector General

United States Department of Defense



Changes Are Needed to the Army Contract With Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot

~~**Special Warning**~~

~~This report contains contractor information that may be company confidential or proprietary. Section 1905, title 18, United States Code, and section 423, title 41, United States Code, provide specific penalties for the unauthorized disclosure of company confidential or proprietary information. You must safeguard this report in accordance with DoD Regulation 5200.1-R.~~

~~FOR OFFICIAL USE ONLY~~

Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE 03 NOV 2011		2. REPORT TYPE		3. DATES COVERED 00-00-2011 to 00-00-2011	
4. TITLE AND SUBTITLE Changes Are Needed to the Army Contract With Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S)				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Department of Defense Office of Inspector General,4800 Mark Center Drive,Alexandria,VA,22350				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)				10. SPONSOR/MONITOR'S ACRONYM(S)	
				11. SPONSOR/MONITOR'S REPORT NUMBER(S)	
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release; distribution unlimited					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT					
15. SUBJECT TERMS					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Additional Copies

To obtain additional copies of this report, contact the Secondary Reports Distribution Unit at (703) 604-8937 (DSN 664-8937) or fax (703) 604-8932.

Suggestions for Audits

To suggest or request audits, contact the Office of the Deputy Inspector General for Auditing by phone (703) 604-9142 (DSN 664-9142), by fax (703) 604-8932, or by mail:

ODIG-AUD (ATTN: Audit Suggestions)
Department of Defense Inspector General
400 Army Navy Drive (Room 801)
Arlington, VA 22202-4704



Acronyms and Abbreviations

ACC-RSA	Army Contracting Command – Redstone Arsenal
AMC	Army Materiel Command
AMCOM	Army Aviation and Missile Life Cycle Management Command
BRAC	Base Realignment and Closure
CCAD	Corpus Christi Army Depot
CIT	Consumable Item Transfer
DLA	Defense Logistics Agency
DOF	Depot Overhaul Factor
EBS	Enterprise Business System
GAO	Government Accountability Office
IFS	Industrial Finance System
LMP	Logistics Modernization Program
NSN	National Stock Number
PBL	Performance-Based Logistics
SDS	Standard Depot System
TELSS	Technical, Engineering, and Logistical Services and Supplies



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

November 3, 2011

MEMORANDUM FOR UNDER SECRETARY OF DEFENSE FOR ACQUISITION,
TECHNOLOGY, AND LOGISTICS
DIRECTOR, DEFENSE LOGISTICS AGENCY
AUDITOR GENERAL, DEPARTMENT OF THE ARMY

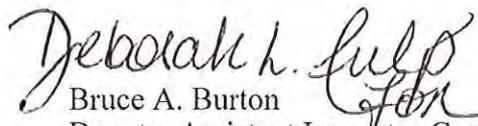
SUBJECT: Changes Are Needed to the Army Contract With Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot
(Report No. DODIG-2012-004)

We are providing this report for review and comment. We identified \$47.5 million to \$58.7 million of excess DoD inventory that could be used to satisfy current and future contract requirements for the Blackhawk weapon system. In addition, Sikorsky contract prices were \$7.6 million, or 85.1 percent, higher than Defense Logistics Agency prices for 3,267 items. Also, the Army made an unjustified payment of \$11.8 million to Sikorsky under its material cost reduction clause metric. This report is one of two reports examining the Army contract with Sikorsky to support the Corpus Christi Army Depot. We considered management comments on a draft of this report when preparing the final report.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. Comments from the Commander, Army Aviation and Missile Life Cycle Management Command, and the Executive Director, Army Contracting Command - Redstone Arsenal, were only partially responsive. Therefore, we request additional comments on Recommendations B.1, B.2, and C.2 by December 5, 2011.

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

We appreciate the courtesies extended to the staff. Please direct questions to Mr. Henry F. Kleinknecht at (703) 604-9324 (DSN 664-9324).


Bruce A. Burton
Deputy, Assistant Inspector General
Acquisition and Contract Management

~~SPECIAL WARNING~~

~~This report contains contractor information that may be company confidential or proprietary. Section 1905, title 18, United States Code, and section 425, title 41, United States Code, provide specific penalties for the unauthorized disclosure of company confidential or proprietary information. You must safeguard this report in accordance with DoD Regulation 5200.1-R.~~

~~FOR OFFICIAL USE ONLY~~



Changes Are Needed to the Army Contract With Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot

What We Did

We evaluated the Army Aviation and Missile Life Cycle Management Command (AMCOM) material purchases from Sikorsky Aircraft Corporation (Sikorsky) supporting the Corpus Christi Army Depot (CCAD) to determine whether the partnership agreement effectively minimized the cost of direct materials to the depot. AMCOM entered into the partnership to address parts availability problems and improve readiness. This report addresses excess DoD inventory, a metric for reducing material costs, and splitting requirements.

What We Found

AMCOM did not effectively use DoD inventory before procuring the same items from Sikorsky because AMCOM did not develop adequate procedures addressing inventory use. We identified \$47.5 million to \$58.7 million of excess inventory that AMCOM could use to satisfy CCAD contract requirements.

AMCOM, as directed by the Army Materiel Command, added a material cost reduction clause into the contract, which was not effective in reducing CCAD repair costs. The clause was designed for Sikorsky and CCAD to share savings associated with reduced material usage for repair programs. However, AMCOM did not use reliable data, did not consider depot labor, and omitted repair programs that experienced material cost increases in its calculation of material cost reduction. Consequently, AMCOM made an unjustified incentive payment of \$11.8 million to Sikorsky for reducing material costs. Our calculations showed that depot costs increased by \$29.3 million.

AMCOM officials did not use the most cost-effective source of supply for consumable items purchased on the contract because AMCOM had not developed an effective material management strategy. The Defense Logistics Agency (DLA) had sufficient inventory to satisfy annual contract requirements for 3,267 items, and the Sikorsky contract price for those items was \$7.6 million, or 85.1 percent, higher than the DLA price. In addition, from 2008 through 2010, Sikorsky was allowed to make excessive profit of about \$930,760 by procuring items from DLA that it then sold to CCAD.

Recommendations, Management Comments, and Our Response

Among other recommendations, we recommend that DoD develop an effective strategy to use existing inventory before procuring new items from Sikorsky and to effectively procure consumable items. The Army Contracting Command – Redstone Arsenal (ACC-RSA) needs to immediately remove the material cost reduction clause from the contract and obtain a refund of \$11.8 million. Also, ACC-RSA needs to include a contract clause that requires Sikorsky to obtain consumable items from DLA as the first source of supply when cost-effective and practical; pursue a refund of \$930,760 for excessive profits charged on purchases from DLA; and modify contract clauses to prevent Sikorsky from making excessive profits. Overall, management comments were responsive except for comments on the recommendations to obtain refunds for the unjustified incentive payment and excessive profits. Therefore, we request additional comments by December 5, 2011. Please see the recommendations table on page iii.

Excess Inventory

The Army is procuring parts from Sikorsky instead of using \$47.5 million to \$58.7 million of excess DoD inventory to satisfy CCAD requirements. (Finding A, Page 8 of the report provide additional details.)

DoD Inventory Could Be Used to Meet CCAD Contract Requirements
(millions)

	Contract Year		Subtotal	Remaining for Future Requirement	Total
	2011	2012			
3 Years of Contingency Stock (113 items)					
CCAD Contract Requirement	\$66.7	\$68.7			\$135.4
Excess Inventory	\$24.6	\$9.8	\$34.5	\$24.2	\$58.7
5 Years of Contingency Stock (87 items)					
CCAD Contract Requirement	\$60.3	\$62.0			\$122.3
Excess Inventory	\$22.2	\$6.6	\$28.8	\$18.7	\$47.5
Excess inventory was calculated by removing 3 or 5 years of DoD demand outside CCAD requirements.					

Example of Excess DoD Inventory Not Being Used

National Stock Number 1680-01-482-3952 is a guide assembly used on the Blackhawk helicopter. As of May 2010, AMCOM had 4,047 in inventory valued at \$5.9 million or \$1,449.41 each at the DLA Distribution Depot, Susquehanna, Pennsylvania. AMCOM officials stated annual demand outside of CCAD is 53 and the CCAD/Sikorsky contract requirements were 54 in 2010 for total annual requirements of 107. Consequently, based on total 2010 demand requirements, the Army has roughly 37.8 years of inventory for the guide assembly that should be used before procuring additional parts from Sikorsky. In response to the audit, AMCOM reduced the 2011 CCAD/Sikorsky contract requirement from 90 to 0.



Guide Assembly



Guide Assembly Inventory

Recommendations Table

Management	Recommendations Requiring Comment	No Additional Comments Required
Commander, Army Aviation and Missile Life Cycle Management Command		A.1, A.2
Executive Director, Army Contracting Command – Redstone Arsenal	B.1, B.2, C.2	C.1, C.3
Director, Defense Logistics Agency Aviation		A.1

Please provide comments by December 5, 2011.

Table of Contents

Introduction	1
Objectives	1
Background	1
Corpus Christi Army Depot	1
Army Aviation and Missile Life Cycle Management Command	1
Defense Logistics Agency	2
Sikorsky	2
CCAD/Sikorsky Contracts	3
Nonstatistical Audit Sample of Material	4
Review of Internal Controls	4
Finding A. Excess DoD Inventory	5
Excess DoD Inventory for Sample Items	5
Existing Inventory Could Satisfy CCAD Requirements	7
Inventory Reduction Plans	7
Management Action Initiated	8
Excess DLA Inventory for CCAD/Sikorsky Contract Items	9
Procedures Needed to Use Existing DoD Inventory	11
Different Management Systems Do Not Provide Visibility of Total Assets	11
Better Management of Inventory Is Needed	12
AMCOM Consumable Item Transfers	13
Recurring Problem of Unused DoD Inventory	14
Recent Guidance to Address Excess DoD Inventory	14
Recommendations, Management Comments, and Our Response	15
Finding B. No Justification for Material Cost Reduction Clause Payment	18
Guidance	18
Material Cost Reduction Clause	18
Federal Acquisition Regulation on Performance Incentives	19
AMCOM Calculation of Material Cost Savings	19
Calculations Were Based on Unreliable Data	20
Depot Labor Costs Were Not Considered	26
Material Increases Were Also Not Considered	27
Changes Are Needed to Control Depot Costs	29
Recommendations, Management Comments, and Our Response	30

Table of Contents (cont'd)

Finding C. Splitting Requirements for Consumable Items Was Not Cost-Effective	33
CCAD/Sikorsky Contract Procurement Strategy	33
Purchases for CCAD Requirements	33
AMCOM and DLA Purchases for Other Customers	34
DoD Needs an Effective Strategy for Procuring Material	35
Economic Order Quantities Were Not Considered	35
The DoD EMALL Is a Valuable Pricing Tool and Can Stimulate Competition Between DLA and Sikorsky	37
Sikorsky Made Excessive Profits on Purchases From DLA	39
Consolidation Goals Not Being Met	42
Consolidation of Inventory Control Points	42
2005 BRAC Recommendations	42
Additional Reviews Needed to Determine the Effectiveness of Consolidation	43
Management Comments on the Finding and Our Response	43
Recommendations, Management Comments, and Our Response	44
Appendices	46
A. Scope and Methodology	46
Interviews and Documentation	46
Nonstatistical Sample Selection	46
Inventory Analysis	46
Price Analysis	47
Material Cost Reduction Analysis	47
Use of Computer-Processed Data	47
B. Prior Coverage	48
Management Comments	
Department of the Army	49
Defense Logistics Agency	66

Introduction

Objectives

The overall objective of the audit was to evaluate material purchases made at Corpus Christi Army Depot (CCAD) through the partnership agreement with Sikorsky Aircraft Corporation (Sikorsky). Specifically, we determined whether the partnership agreement¹ with Sikorsky effectively minimized the cost of direct materials to the depot. See Appendix A for a discussion of the scope and methodology. This report is one of two reports examining the Army contract with Sikorsky to support CCAD; the other report will address spare parts pricing problems.

We performed this audit pursuant to Public Law 110-417, “Duncan Hunter National Defense Authorization Act for Fiscal Year 2009,” section 852, “Comprehensive Audit of Spare Parts Purchases and Depot Overhaul and Maintenance of Equipment for Operations in Iraq and Afghanistan,” October 14, 2008. Section 852 requires:

... thorough audits to identify potential waste, fraud, and abuse in the performance of the following: (1) Department of Defense contracts, subcontracts, and task and delivery orders for—(A) depot overhaul and maintenance of equipment for the military in Iraq and Afghanistan; and (B) spare parts for military equipment used in Iraq and Afghanistan.

Background

Corpus Christi Army Depot

CCAD, located in Corpus Christi, Texas, is a maintenance depot in the Army Working Capital Fund Industrial Operations activity group whose mission is to overhaul, repair, modify, retrofit, test, and modernize helicopters, engines, and components for all services and foreign military customers. CCAD also is actively engaged in resetting equipment returning from operations in Iraq and Afghanistan. CCAD falls under the operational control of the Army Aviation and Missile Life Cycle Management Command (AMCOM).

Army Aviation and Missile Life Cycle Management Command

AMCOM is headquartered at Redstone Arsenal, Alabama, and is a major subordinate command of the Army Materiel Command (AMC). AMCOM was established as a readiness command to develop, acquire, field, and sustain aviation and missile weapons systems. AMCOM provides life-cycle management of Army aviation and missile systems from research and development to procurement and production; from spare parts availability to flight safety; and from maintenance and overhaul to eventual retirement.

¹ The partnership agreement is a contract for technical, engineering, and logistics services support and for material parts support.

In addition, AMCOM strives to ensure that the Army's aviation and missile systems are technologically superior, affordable, and always ready for use.

Defense Logistics Agency

The Defense Logistics Agency (DLA), headquartered at Fort Belvoir, Virginia, provides logistics, acquisition, and technical services to the Army, Navy, Air Force, Marine Corps, other Federal agencies, and joint and allied forces. DLA reportedly supplies 84 percent of the military's spare parts. Further, in addition to regional commands, DLA is organized into primary level field activities. Among them are DLA Land and Maritime, DLA Troop Support, and DLA Aviation.

Sikorsky

Sikorsky Aircraft Corporation, according to its Web site, is a “world leader in the design, manufacture and service of military and commercial helicopters; fixed-wing aircraft; spare parts and maintenance, repair and overhaul services for helicopters and fixed-wing aircraft; and civil helicopter operations.” One of the helicopters that Sikorsky manufactures is the UH-60 Blackhawk helicopter. The Blackhawk, a utility tactical transport helicopter, entered Army service in 1979. Its mission is to provide air assault, general support, aeromedical evacuation, command and control, and special operations support to combat and stability and support operations. Figure 1 shows the Blackhawk helicopter.

Figure 1. UH-60 Blackhawk Helicopter



Source: www.army.mil

CCAD/Sikorsky Contracts

In December 2002, the AMCOM Contracting Center² issued a delivery order contract to Sikorsky, which bundled the technical, engineering, and logistical services and supplies (TELSS) support provided to CCAD for the repair, overhaul or recapitalization, and upgrade of the H-60 utility series helicopter. Under TELSS, Sikorsky acts as AMCOM's procurement manager and is responsible for obtaining and providing material needed by CCAD. AMCOM officials view TELSS as a success when repair turn around time of airframes and depot level repairable components is reduced and the overall production quality is improved. The AMCOM Contracting Center has awarded four TELSS contracts to Sikorsky.

Contract DAAH23-03-D-0043

The AMCOM Contracting Center awarded the initial CCAD/Sikorsky contract on December 2, 2002. The contract was a 5-year fixed-price, indefinite-delivery, indefinite-quantity requirements type contract for integrated services and supplies to support the overhaul and repair of H-60 components at CCAD. The total contract value was \$415 million, or an average of about \$80 million a year.

Bridge Contracts (W58RGZ-08-C-0037 and W58RGZ-08-C-0172)

The AMCOM Contracting Center awarded the initial bridge contract, W58RGZ-08-C-0037, on November 29, 2007, for the period December 1, 2007, through May 30, 2008. The total contract value was \$76 million. The AMCOM Contracting Center awarded the second bridge contract, W58RGZ-08-C-0172, on June 2, 2008, for the period June 2, 2008, through November 30, 2008. The total contract value was about \$101 million. The value of the two contracts together was about \$177 million.

Contract W58RGZ-09-D-0029

The AMCOM Contracting Center awarded the current contract on November 24, 2008. This contract is a firm-fixed-price, indefinite-delivery, indefinite-quantity contract with options available to extend performance through November 30, 2012. The TELSS contract has an annual cost of about \$224 million or \$895 million for the 4-year performance period and includes over 7,000 items.

² AMCOM Contracting Center or the Army Contracting Command – Redstone Arsenal is one of seven contracting centers under the Army Contracting Command.

Nonstatistical Audit Sample of Material

We selected 332 national stock numbers (NSNs) to review, which equaled about 80 percent of the total dollar value of items³ Sikorsky was required to furnish for the Blackhawk weapon system from 2009 through 2012. As shown in Table 1, our sample included 93 Army-managed parts (Army items); 184 DLA-managed consumable items (DLA consumables); and 55 consumable items, of which AMCOM transferred management to DLA (consumable item transfers). For more detailed information on the sample selection, see Appendix A.

Table 1. Contract Dollar Value of Sample Items

	No. of Items	Contract Dollar Value (millions)				
		2009	2010	2011	2012	Total
Army items	93	\$40.8	\$41.7	\$51.8	\$53.1	\$187.4
DLA consumables	184	36.3	37.2	48.0	49.8	171.3
Consumable item transfers	55	30.5	31.1	37.5	38.5	137.5
Total	332	\$107.5*	\$110.0	\$137.2*	\$141.4	\$496.1*

*Slight rounding inconsistencies exist because auditor calculation included decimal places.

Review of Internal Controls

DoD Instruction 5010.40, “Managers’ Internal Control Program (MICP) Procedures,” July 29, 2010, requires DoD organizations to implement a comprehensive system of internal controls that provides reasonable assurance that programs are operating as intended and to evaluate the effectiveness of the controls. We identified an internal control weakness for AMCOM and DLA. Specifically, procedures to fully use existing DoD inventory before procuring the same items from commercial sources have not been developed. For specific results of this weakness, see Finding A of this report. We will provide a copy of the report to the senior official responsible for internal controls for AMCOM and DLA.

³ The total dollar value of items amounted to \$619.9 million based on planned contract quantities.

Finding A. Excess DoD Inventory

AMCOM officials did not effectively use \$205.9 million of DoD inventory before procuring the same items directly from Sikorsky under the CCAD/Sikorsky contract to support the Blackhawk weapon system. DoD inventory was not effectively used for the following reasons:

- AMCOM officials did not develop procedures to fully use existing DoD inventory before procuring the same items from Sikorsky. The Army, DLA, and Sikorsky⁴ all used different systems to manage inventory and requirements and no system provides total asset visibility or requirements information. AMCOM officials have a responsibility to match and reduce CCAD/Sikorsky contract requirements when existing DoD inventory is available.
- AMCOM officials transferred inventory to DLA Aviation as part of a 2005 Base Realignment and Closure (BRAC) supply and storage recommendation, but did not transfer requirements for the items that are now being met by Sikorsky on the CCAD/Sikorsky contract.

As a result, we identified \$47.5 million (87 items) to \$58.7 million⁵ (113 items) of excess DoD inventory that could be used to satisfy CCAD/Sikorsky contract requirements for the Blackhawk helicopter (\$28.8 million to \$34.5 million over the next 2 contract years with an additional \$18.7 million to \$24.2 million that could be used to satisfy future contract requirements). Using the DoD EMALL,⁶ we identified an additional \$46.8 million (valued at the DLA standard unit price), or \$230.7 million (valued at the contract price) of DLA inventory, for 1,676 items that AMCOM could have used to meet CCAD requirements rather than procuring these items from Sikorsky.

Excess DoD Inventory for Sample Items

According to the material attachments to the CCAD/Sikorsky contract, relating to our audit sample of 332 items, AMCOM officials plan to buy \$276.7 million of inventory from Sikorsky over the remaining 2 years of the contract. However, based on January 2011 Federal Logistics Information System prices, we calculated that DoD has \$205.9 million of the same items in inventory, which must be used.

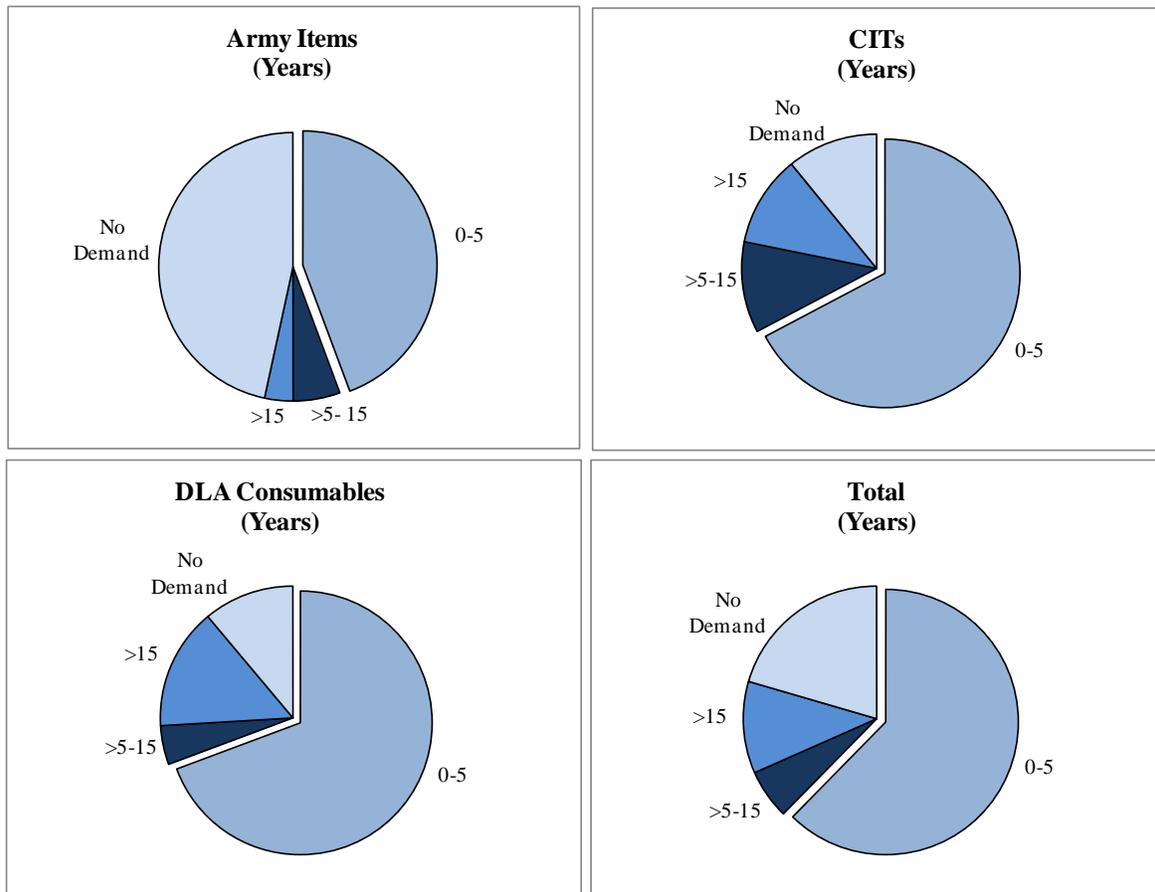
⁴ Derco Aerospace, a wholly owned subsidiary of Sikorsky, performs procurement and warehousing functions for the CCAD/Sikorsky contract.

⁵ Our calculation is based on the 2010 through 2012 unit prices in the CCAD/Sikorsky contract, modification P00034, dated July 13, 2010. The range of excess inventory depends on whether DoD retains a 3-year or 5-year contingency stock for requirements outside the CCAD/Sikorsky contract.

⁶ The DoD EMALL is a full-service eCommerce site, which strives to be the single entry point for purchasers to find and acquire off-the-shelf finished goods and services from the commercial market place and Government sources. The DoD EMALL offers cross-store shopping to compare prices and other best value factors. The DoD EMALL suppliers are Government-approved sources and comply with Federal Acquisition Regulation requirements.

DoD warehouses contained high levels of inventory for many of the items in our audit sample, but there was little to no demand for over a third of these items outside the CCAD/Sikorsky contract. Figure 2 shows a breakout of our audit sample by Army items, consumable item transfers (CITs), and DLA consumables, and the years of inventory in DoD warehouses. We used the 2009 demand levels to calculate the years of inventory, or the time period before the existing inventory will be consumed. The cut-away section of each pie chart depicts 0 to 5 years of demand, or the amount of inventory that we think is reasonable to retain. The “Total” pie chart shows that DoD had greater than 5 years of inventory for 38 percent of the items in our audit sample (excluding CCAD/Sikorsky contract requirements).

Figure 2. Years of Existing Inventory, Excluding CCAD/Sikorsky Contract Requirements



A specific example of a part with excess inventory is a guide assembly (Sample 295 - NSN 1680-01-482-3952) used on the Blackhawk helicopter. As of May 2010, AMCOM had 4,047 in inventory, valued at \$5.9 million or \$1,449.41 each. AMCOM officials stated the annual demand outside of CCAD is 53. In 2010, the Army agreed to procure 54 of this part from Sikorsky. If the Army retained 5 years of contingency stock and used existing inventory to meet contract demand of 120 for the remaining 2 years

(60 annually⁷) of the CCAD/Sikorsky contract, the Army could avoid costs of \$184,504. The Army would still own remaining inventory of 3,662 parts (32 years), valued at \$5.7 million, which could be used to satisfy future requirements. Figure 3 shows guide assembly inventory at the DLA Distribution Depot Susquehanna, Pennsylvania.

Figure 3. Sample 295 - Guide Assembly



An individual guide assembly



Guide assembly inventory at DLA Distribution Depot, Susquehanna, PA

Existing Inventory Could Satisfy CCAD Requirements

The existing DoD inventory could be used to satisfy requirements on the CCAD/Sikorsky contract. Specifically, for the sample items, we identified \$28.8 million to \$34.5 million of CCAD/Sikorsky contract requirements scheduled to be procured over the next 2 years that could be satisfied with existing DoD inventory. We also identified an additional \$18.7 million to \$24.2 million that could be used to satisfy future CCAD requirements. Consequently, DoD has \$47.5 million to \$58.7 million in existing inventory that could be used to satisfy current and future CCAD requirements.

DoD has \$47.5 million to \$58.7 million in existing inventory that could be used to satisfy current and future CCAD requirements.

Inventory Reduction Plans

We developed two reduction plans that provided for retaining either 3 years or 5 years of inventory as contingency stock. Both plans used the remaining inventory to meet the planned requirements on the CCAD/Sikorsky contract. Our reduction calculation was based on demand and inventory data provided by AMCOM on May 11, 2010, and 2009 annual demand and inventory data provided by DLA on March 30, 2010.

Table 2 shows that DoD has \$58.7 million (113 items) of excess inventory (if 3 years of contingency stock is retained) that could be used to meet CCAD requirements: \$34.5 million over the next 2 years. For example, the 2011 contract requirement is

⁷ During the audit, AMCOM revised 2011 and 2012 contract requirements to 90 annually.

\$66.7 million; however, DoD has \$24.6 million of excess inventory that could be used to satisfy part of this requirement. If the Army used the excess inventory, they would only have to fund the contract for \$42.1 million in 2011. The excess inventory predominantly relates to items or NSNs that are only used in the depot (\$45.0 million of the \$58.7 million, or 76.6 percent).

**Table 2. DoD Inventory Could Be Used to Meet Contract Requirements
(3 Years of Contingency Stock)**
(millions)

113 Items	Contract Year		Subtotal	Remaining for Future Requirement	Total
	2011	2012			
Contract value	\$66.7	\$68.7			\$135.4
Army items (37)	13.0	6.0	\$19.0	\$10.9	29.9
CITs ¹ (26)	5.9	2.0	7.8 ²	11.3	19.1
DLA consumables (50)	5.8	1.9	7.6 ²	2.0	9.6
Excess DoD inventory (113)	\$24.6²	\$9.8²	\$34.5²	\$24.2	\$ 58.7²

¹Consumable item transfers from the Army to DLA.
²Slight rounding inconsistencies exist because auditor calculations included decimal places.

Table 3 shows that DoD has \$47.5 million (87 items) of excess inventory (after 5 years of contingency stock is retained) that could be used to meet CCAD requirements: \$28.8 million over the next 2 years. The excess inventory predominantly relates to items or NSNs that are used only in the depot (\$42.0 million of the \$47.5 million, or 88.4 percent).

**Table 3. DoD Inventory Could Be Used to Meet Contract Requirements
(5 Years of Contingency Stock)**
(millions)

87 Items	Contract Year		Subtotal	Remaining for Future Requirement	Total
	2011	2012			
Contract value	\$60.3	\$62.0			\$122.3
Army items (33)	12.4	3.6	\$16.1 ¹	\$9.8	25.9
CITs ² (18)	4.9	1.4	6.3	7.2	13.5
DLA consumables (36)	4.8	1.6	6.4	1.7	8.1
Excess DoD inventory (87)	\$22.2¹	\$6.6	\$28.8	\$18.7	\$47.5

¹Slight rounding inconsistencies exist because auditor calculations included decimal places.
²Consumable item transfers from the Army to DLA.

Management Action Initiated

During the audit, we briefed AMCOM officials on excess inventory that could be used to meet contract requirements. AMCOM officials agreed with the audit team's methodology for calculating potential inventory reductions. However, AMCOM officials stated that when AMCOM calculates an inventory reduction, they need to take into

account that Sikorsky has long-term contracts and when quantities are decreased under the contract, additional costs need to be considered. AMCOM officials stated that they had engaged Sikorsky on the need to reduce DoD inventory and were pursuing an agreement before the next option year that begins in November 2010. On December 1, 2010, the AMCOM Contracting Center issued contract modification P00049, which applied Army-owned inventory to reduce contract requirements.

Excess DLA Inventory for CCAD/Sikorsky Contract Items

Using the DoD EMALL, we were able to obtain stock on hand, consumption data, and the DLA standard unit price for 5,405 of 7,093 items⁸ on the CCAD/Sikorsky contract. We removed the inventory and annual requirements for the sample items already discussed, resulting in a total of 6,765 items. As of September 2010, DLA had existing inventory valued at \$131.8 million that could be used to meet contract requirements. This same inventory would cost \$419.8 million if procured under the CCAD/Sikorsky contract (Table 4). For parts with either no demand or greater than 5 years of inventory, DLA had inventory of \$230.7 million valued at the contract price and only \$19.7 million (DLA and CCAD) of annual requirements. CCAD annual requirements of \$7.1 million account for more than a third of the total requirements.

Table 4. DLA Excess Inventory That Should Be Used to Meet CCAD Requirements
(millions)

Years of Inventory	No. of Items	DLA On-Hand Inventory Value		Annual Requirements at Contract Price	
		DLA Standard Unit Price	Contract Price ¹	DLA	CCAD
No demand	247	\$1.7	\$3.7	\$ -	\$1.2
> 15	589	16.3	151.2	3.3	2.6
> 5 to 15	840	28.8	75.8	9.2	3.3
Subtotal	1,676	\$46.8	\$230.7	\$12.6²	\$7.1
< 5	3,565	85.0	189.1	166.9	16.8
No inventory or not in DoD EMALL	1,524	N/A	N/A	N/A	N/A
Total	6,765	\$131.8	\$419.8	\$179.5	\$23.9
¹ The 2010 contract unit price was used to calculate contract value. In addition, 134 items were valued at 0 because the unit of issue was not comparable. ² Slight rounding inconsistencies exist because auditor calculations included decimal places.					

A large part of the difference between the DLA (\$131.8 million) and contract (\$419.8 million) inventory values related to low-dollar parts being procured more economically by DLA. The largest difference was in the category of 15 years or more of

⁸ The 7,093 items do not include 4 items identified in our sample because they were removed in contract modification P00034, which we used as the basis for our calculations.

inventory (\$16.3 million vs. \$151.2 million) that related primarily to parts that DLA procured in packages of a hundred, while the CCAD/Sikorsky contract procured the same parts in an uneconomical order quantity (each). See Table 5 for examples of the pricing difference for four parts, which account for an \$80.9 million difference in inventory values. However, CCAD was not procuring large quantities low-dollar parts from Sikorsky as the 2010 annual contract requirements for the parts ranged from only 2 to 628. See Finding C for more discussion on the uneconomical quantities being procured under the CCAD/Sikorsky contract.

Table 5. Low-Dollar Parts Affect Calculation of DLA Inventory Value at Contract Price

NSN (Description)	DLA On-Hand Inventory ¹	DLA Price		Contract Price ²		Difference	
		Unit ¹	Total	Unit	Total	Amount	Percent
5305000545647 (machine screw)	11,697,500	\$0.03	\$ 329,870	\$ 2.15	\$25,149,625	\$24,819,756	7,524
5306002089029 (bolt)	3,162,600	0.30	944,036	10.65	33,681,690	32,737,654	3,468
5340002118188 (cap)	10,425,400	0.02	225,189	1.41	14,699,814	14,474,625	6,428
5940001434771 (terminal)	7,497,900	0.05	363,648	1.23	9,222,417	8,858,769	2,436
Total			\$1,862,742		\$82,753,546	\$80,890,804	4,243

¹To show an equal comparison, we converted the DLA on-hand inventory quantity and unit price from a unit of issue of a “hundred” to a unit of issue of “each.”

²The 2010 annual contract requirements for the parts ranged from only 2 to 628 and are not representative of the DLA on-hand inventory quantities.

DLA has excess inventory that should be used to meet contract requirements. One example of excessive inventory is a retainer (NSN 3110-01-243-6588) used on the Blackhawk helicopter. As of September 2010, DoD EMALL showed 614 of the retainer in inventory, valued at \$591.50 each, with an annual demand of 2. In 2010, the Army agreed to procure 18 from Sikorsky, valued at \$2,613.23 each, 341.8 percent higher than the DLA price. We calculated, based on 2010 unit prices, that if the Army procured this part from DLA to meet contract demand of 54 for contract years 2010 through 2012 (18 annually), the Army could avoid costs of \$109,173 and DLA would still have 560 parts (28 years) in inventory that could be used to meet future requirements. Figure 4 shows a retainer.

Figure 4. Retainer



~~FOR OFFICIAL USE ONLY~~

It is a waste of DoD funds to procure the same items from Sikorsky at much higher prices when DLA has sufficient existing inventory to meet CCAD requirements.

Procedures Needed to Use Existing DoD Inventory

AMCOM officials did not develop procedures to fully use existing DoD inventory before procuring the same items from Sikorsky at higher prices. The Army, DLA, and Sikorsky all used different systems to manage inventory and requirements, and no system provided total asset visibility or requirements information. AMCOM officials have a responsibility to match and reduce CCAD/Sikorsky contract requirements when existing DoD inventory is available. AMCOM also had not effectively coordinated support requirements with DLA to reduce excess inventory. To effectively use existing DoD inventory, an ongoing effort and better communication between the Services and DLA is required.

Different Management Systems Do Not Provide Visibility of Total Assets

The Army used the Logistics Modernization Program (LMP), and DLA used the Enterprise Business System (EBS) to manage their inventories. Sikorsky's warehouse manager, Derco Aerospace, used the Industrial Finance System (IFS) to manage its inventories at CCAD. However, the different systems did not provide total asset visibility of inventory managed in each system. In addition, no one took responsibility to periodically match available DoD inventory with requirements. The responsibility for this effort lies with AMCOM because they have visibility over what items are covered under its contract.

Logistics Modernization Program System

In February 1998, AMC began to replace its existing material management systems with LMP. Before LMP, AMC relied on a 30-year-old system to manage its logistics operations and supply critical equipment and repair items. The lack of a single, unified supply system across the Army fostered an environment in which numerous organizations developed independent material management systems. As a result, the Army faced serious challenges in managing its supply chain and distribution infrastructure. As of February 2007, LMP managed \$4.5 billion worth of inventory, processed transactions with 50,000 vendors, and integrated with more than 80 DoD systems. When fully implemented, LMP is expected to include approximately 21,000 users at 104 locations across the globe, and it will be used to manage more than \$40 billion worth of goods and services, such as inventory managed at the national level and repairs at depot facilities. The Army implemented LMP at AMCOM and CCAD in May 2009.

While the Army has visibility of inventory, requirements, and due-in quantities of Army items, LMP does not provide visibility of total inventory or requirements for DLA consumables or consumable items that the Army transferred to DLA. However, the DoD EMALL system can provide visibility for DLA consumables, as discussed in the following paragraph.

Enterprise Business System

EBS is DLA's primary information technology to support the evolving logistics needs of DoD. EBS provides functionality in five core process areas: (1) order fulfillment – customer service and requisition processing; (2) planning – demand and supply planning; (3) procurement – sourcing and supplier management; (4) tech quality – product data and

The DoD EMALL, which was fully integrated with EBS, provides easy access to stock-on-hand levels, monthly consumption data, and DLA standard unit prices for all DLA consumables.

quality management; and (5) finance – financial processing and management. EBS only included visibility of DLA inventory levels and demands but had no information on Army items. The DoD EMALL, which was fully integrated with EBS, provides easy access to stock-on-hand levels, monthly consumption data, and the DLA standard unit price for all DLA consumables. See Table 4 (page 9)

for information obtained from the DoD EMALL. The DLA Aviation performance-based logistics program manager stated that all DoD Service personnel can access DoD EMALL via a common access card. Contractors, such as Sikorsky, would need Public Key Infrastructure Certificates if they did not have common access cards to access DoD EMALL.

Industrial Finance System

The IFS inventory management system was used by Derco Aerospace at CCAD. IFS is a single, integrated product that supports the management of four core processes: (1) service and asset, (2) manufacturing, (3) projects, and (4) supply chain. Derco Aerospace used IFS [REDACTED] to forecast contract requirements. Although IFS provided visibility of CCAD inventory, IFS did not have visibility into LMP or EBS inventory levels that could be used to meet CCAD requirements.

Better Management of DoD Inventory Is Needed

While both the Army and DLA had their own systems to track requirements, stock on hand, and stock due in, these systems were not connected to determine whether there was inventory on-hand to meet the requirements before procuring new items, and no one was assigned responsibility to match CCAD requirements with DLA inventory identified in DoD EMALL. Having multiple systems to track inventory led to significant levels of unused inventory. Therefore, continuous communication about requirements and inventory levels must occur to ensure that existing inventory is used before purchasing the same items from private contractors.

The Commander, AMCOM, and the Director, DLA Aviation, need to establish a team with representatives from CCAD and Sikorsky to develop a plan to use excess DoD inventory to meet CCAD requirements. Additionally, an annual provisioning conference should be held to revisit the excess inventory situation until it is resolved.

[Recommendation A.1 – Internal Control]

If AMCOM officials want Sikorsky to manage items to meet CCAD requirements, they need to assign responsibility and make Sikorsky accountable through contract terms and metrics for reducing existing DoD inventory. [Recommendation A.2.a]

AMCOM Consumable Item Transfers

AMCOM officials transferred inventory to DLA Aviation as part of a 2005 BRAC supply and storage recommendation,⁹ but did not transfer requirement for the items that are now being met by Sikorsky on the CCAD/Sikorsky contract. Specifically, AMCOM officials transferred the management of 54 consumable items¹⁰ in our sample with an inventory value of \$67.5 million,¹¹ to DLA. We determined that almost half (26 items, based on 3-year contingency stock) of the 54 consumable items had excess inventory. We calculated that \$13.5 million to \$19.1 million of excess DoD inventory could be used to satisfy contract requirements for the Blackhawk helicopter.

For example, one of the consumable items that AMCOM officials transferred to DLA on May 2010 was a rotary wing fold set (Sample 37-NSN 1560-01-082-9202) used on the Blackhawk helicopter. As of April 2011, DLA had 285 in inventory at \$9,598.93 each, a total value of \$2.7 million. Only 23 sets were requisitioned from DLA in 2011, and these were requisitioned primarily by CCAD. AMCOM personnel stated that this item had an annual demand outside of CCAD of 34 sets. We calculated that AMCOM officials plan to spend an additional \$1.5 million, or \$14,990.93 each, to procure 97 more of this part from Sikorsky during the 2-year remaining performance of the CCAD/Sikorsky contract when DLA would still have 188 of these in inventory.

According to the business case analysis for BRAC CIT, consumable items that were part of a contractor logistics support contract, such as the CCAD/Sikorsky contract, would continue to be managed by the contractor and within the Army system. Separating the consumable items out from the contractor logistics support contract and transferring them to DLA for management would undermine the outsourcing efforts and result in ineffectiveness, as well as readiness issues.

The Commander, AMCOM, needs to require that AMCOM Integrated Materiel Management Center not transfer items to DLA when future requirements for those items will be supported by commercial sources. [Recommendation A.2.b]

⁹ 2005 BRAC supply and storage recommendation 176 relates to the procurement and management of aviation depot-level repairables and consumable items, realigning functions from AMCOM to DLA.

¹⁰ One of the consumable items scheduled to transfer was retained by AMCOM.

¹¹ Inventory value was calculated using the 2011 contract price and on-hand inventory balance as of April 2011.

Recurring Problem of Unused DoD Inventory

This is not the first time we have identified unused DoD inventory relating to contractor logistics support or performance-based logistics (PBL) contracts. During our review of the Air Force Secondary Power Logistics Solution contract,¹² we identified about \$70 million of unused DoD inventory because the Air Force was buying the same items from a private contractor through a PBL arrangement. Additionally, DoD IG Report No. D-2011-061, “Excess Inventory and Contracting Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot,” May 3, 2011, identified that the Army could potentially avoid costs of \$242.8 million to \$277.8 million by using existing inventory to meet CCAD requirements for the Apache and Chinook weapon systems.

DoD needs to implement overall policies and procedures requiring reviews of inventory levels and the use of existing DoD inventory before procuring the same items from a private contractor under a contractor logistics support contract or PBL arrangement or contracts. Otherwise, hundreds of millions of dollars will be wasted as the inventory sits in DLA warehouses and DoD pays private contractors to provide the same items.

Recent Guidance to Address Excess DoD Inventory

In response to our earlier reports, both the Army and DoD have taken action to address the utilization of excess inventory. On August 11, 2010, AMC issued policy memorandum, “Order of Preference for Utilizing Repair Parts from Various Source of Supply (SOS) Inventories in Fulfilling Depot Level Maintenance Oriented Performance Based Logistics (PBL) Agreements and Public-Private Partnerships.” AMC issued the policy to ensure its Life Cycle Management Commands establish requirements for contractors to “. . . first use Government inventories to meet Depot-Level Maintenance oriented performance-based logistics agreements and public-private partnerships before acquiring new parts from commercial sources of supply.” The policy requires Life Cycle Management Commands to deplete AMC inventories first and then use DLA inventory for parts that DLA is the primary source of supply. Maintenance support contractors can purchase parts from commercial sources only after all Government inventory is depleted.

A December 20, 2010, memorandum, “Maximum Utilization of Government-Owned Inventory in Performance-Based Logistics Arrangements,” from the Principal Deputy Under Secretary of Defense for Logistics and Materiel Readiness, established that a standard practice on all PBL arrangements and partnering agreements should be the use of government inventory. The memorandum also required existing arrangements to be reviewed to ensure maximum use of government inventory and stated that policy will be strengthened to emphasize the use of government inventory before procuring contractor-owned inventory. Specifically, the memorandum stated:

¹² DoD IG Report No. D-2010-063, “Analysis of Air Force Secondary Power Logistics Solution Contract,” May 21, 2010.

Recent Department of Defense (DoD) Inspector General reports have highlighted the need to review inventories and use government-owned repair parts before procuring the same parts from private contractors through performance-based logistics (PBL) arrangements or contractor logistics support. PBL arrangements are an important method of support for weapon systems and may employ either government-owned or contractor-owned repair parts. When executing commercial product support strategies, particularly in today's environment of affordability and efficiency, **use of on-hand and due-in government inventory should be a standard practice on all PBL arrangements and partnering agreements.** When PBL arrangements utilize commercial sources, stocking objectives should be adjusted accordingly. DoD 4140.1-R (Volumes 2 and 3), "DoD Supply Chain Materiel Management Regulations" provides further guidance on adjusting inventory levels and forecasting to meet changes in demand.

While DoD Instruction (DoDI) 5000.02, "Operation of the Defense Acquisition System," DoDI, 4151.21, "Public-Private Partnerships for Depot-Level Maintenance," and DoD 4140.1-R require full costs and benefits be considered in developing support arrangements, **policy is being strengthened to emphasize the utilization of government-owned inventory before procuring contractor-owned inventory.** In the interim, **existing performance-based arrangements should be reviewed to ensure maximum use of on-hand and due-in government owned inventory** to support good business practices. [emphasis added]

We consider the new guidance to be a step in the right direction. However, the Services and DLA should make this a continual effort and establish better communication to fully address existing DoD inventory.

Recommendations, Management Comments, and Our Response

A.1. We recommend that the Commander, Army Aviation and Missile Life Cycle Command, and Director, Defense Logistics Agency Aviation, establish a team with representatives from Corpus Christi Army Depot and Sikorsky to develop an acceptable plan to use existing inventory to meet current and future Corpus Christi Army Depot requirements. Additionally, an annual provisioning conference should be held to revisit the excess inventory situation until it is resolved.

Department of the Army Comments

The Chief of Staff, AMCOM, partially agreed. The Chief of Staff stated that AMCOM Integrated Materiel Management Center performed a detailed review of available inventory and identified \$24.7 million in excess AMCOM inventory that could be used to satisfy CCAD requirements. He stated that currently, a memorandum of agreement among AMCOM, DLA, CCAD, and Sikorsky is in process to ensure that Government inventory is used as a first priority and that the contract will be modified to reflect usage of any applicable Government-furnished material. He also stated that DLA excess inventory will be used in accordance with recent guidance and that AMCOM will use excess inventories before procuring additional material under the CCAD/Sikorsky contract as appropriate.

~~FOR OFFICIAL USE ONLY~~

In addition, he stated that the IG calculation in Table 5 appears to indicate that the Army would pay \$80.9 million in excess of DLA prices for the items identified. The contract quantities purchased through August 2011 are very small with an extended value of \$22,990, while DLA prices would amount to \$4,562. Therefore, the \$80.9 million calculation is not a correct indicator of what we have paid.

Defense Logistics Agency Comments

The Commander, DLA Aviation, agreed. The Commander stated that DLA will work with AMCOM personnel to use existing inventory to meet current and future contract requirements. He stated that DLA and AMCOM assembled a team, which began to meet in FY 2011. He also stated that DLA recognizes its responsibility of monitoring inventory and of facilitating communication among AMCOM, CCAD, and Sikorsky regarding availability of material, but AMCOM is responsible for determining what it procures from DLA.

Our Response

Comments from the Chief of Staff, AMCOM, and the Commander, DLA Aviation, were responsive. We recognize that AMCOM and DLA are working to meet the intent of the recommendation by taking action to address excess inventory. However, AMCOM's response only addressed AMCOM inventory and did not fully address DLA inventory. We will provide additional followup to ensure the DLA inventory is fully utilized.

The intent of Table 5 was merely to put in perspective the data in Table 4 valuing DLA inventory at the contract price. We recognize that AMCOM only procured small quantities at the significantly higher contract prices.

A.2. We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command:

a. Determine whether Sikorsky should manage the reduction of existing DoD inventory in meeting Corpus Christi Army Depot requirements. If so, assign responsibility and make Sikorsky accountable through contract terms and metrics.

Department of the Army Comments

The Chief of Staff, AMCOM, partially agreed. The Chief of Staff stated that Sikorsky will not manage the reduction of excess inventory, but AMCOM will require Sikorsky to meet existing contract metrics while working within a framework of reducing existing excess inventory.

Our Response

Although the Chief of Staff, AMCOM, partially agreed, his comments were responsive. No further comments are required.

b. Require that the Army Aviation and Missile Life Cycle Management Command, Integrated Materiel Management Center, not transfer items to Defense Logistics Agency when future requirements for those items will be supported by commercial sources.

Department of the Army Comments

The Chief of Staff, AMCOM, partially agreed. The Chief of Staff stated that the Principal Deputy, Logistics and Materiel Readiness, Office of the Assistant Secretary of Defense, provided a similar response to DoD IG Report No. D-2011-061. The Chief of Staff stated that the policy addressing transfer of items already exists in DoD Manual 4140.26-M, Volume 2, “The DoD Integrated Material Management (IMM) for Consumable Items: Item Management Coding (IMC) Criteria.” The Chief of Staff stated that the policy states that consumable items that are unique to a weapon system and are included in a performance-based life-cycle product can be retained by the Military Departments’ contractor or agent. He also stated that those items that are not unique to a weapon system will be assigned to DLA or the General Services Administration for management.

Our Response

Although the Chief of Staff, AMCOM, partially agreed, his comments were responsive. No further comments are required.

Finding B. No Justification for Material Cost Reduction Clause Payment

AMCOM officials, as directed by AMC officials, added a material cost reduction clause into the CCAD/Sikorsky contract, which was not effective in reducing CCAD repair costs. The clause was designed for Sikorsky and CCAD to share savings associated with reduced material usage for repair programs. However, the clause was not effective because AMCOM officials:

- used unreliable data to calculate that material costs were reduced by \$23.7 million from baseline to performance costs;
- failed to consider depot labor (hours) costs in its cost reduction methodology; and
- omitted repair programs that experienced material cost increases, as required by the clause, from its incentive calculation.

As a result, on January 25, 2011, AMCOM officials made an unjustified payment of \$11.8 million for the 2009 performance period (half of the \$23.7 million material cost reduction calculation) based on performance data that included incomplete transactions; negative transactions, which showed material costs to repair items at less than zero; and lower material prices procured from sources outside the CCAD/Sikorsky contract. The incentive calculation also failed to include repair programs with increased depot labor costs of \$26.1 million and repair programs with material cost increases of \$15.1 million. We calculated that overall depot costs increased by \$29.3 million for the 70 repair programs covered under the contract.

Guidance

Material Cost Reduction Clause

The 2009 CCAD/Sikorsky contract included an incentive to reduce material cost at the depot. According to AMCOM officials, AMC officials directed the inclusion of the material cost reduction clause before the contract could be awarded. The material cost reduction clause outlined an equal share of reductions in material costs for repair programs between AMCOM and Sikorsky. In addition, the clause identified areas of opportunity related to maintaining accountability of assets, repairing instead of replacing material, and extending the useful life of parts. The CCAD/Sikorsky contract, dated November 24, 2008, outlined the concept of the clause and targeted reducing new material consumption and depot overhaul factors (DOF).¹³

The Army and Sikorsky agree to a goal of 10% reduction in new material consumption at the depot over the life of the contract. The

¹³ The DOF determines how many materials are needed to be replaced in a repair program.

approach to providing immediate impact to depot material costs resides in the area of **driving down depot new material consumption**. Sikorsky is uniquely postured to provide immediate impact to the usage of material by the CCAD labor force throughout the repair process. Through a focused approach to reducing depot overhaul factors (DOFs), **Sikorsky will be incentivized to attack high usage/high dollar material and reduce the DOF factors resulting in material replacement cost savings to the government**. This proactive approach to the reduction of material usage will focus Sikorsky on **applying OEM engineering and logistics expertise toward material consumption analysis and usage reduction**. Reduced material costs will be accomplished while ensuring that there is no degradation to quality or Time On Wing of production output. The government and Sikorsky will share at a ratio of 50/50 in savings of these reduced material costs. [emphasis added]

Federal Acquisition Regulation on Performance Incentives

Federal Acquisition Regulation 16.402-2, "Performance Incentives," states that both positive and negative performance incentives should be considered when performance is critical and incentives are likely to motivate the contractor:

(a) Performance incentives may be considered in connection with specific product characteristics (e.g., a missile range, an aircraft speed, an engine thrust, or vehicle maneuverability) or other specific elements of the contractor's performance. These incentives should be designed to relate profit or fee to results achieved by the contractor, compared with specified targets.

(b) **To the maximum extent practicable, positive and negative performance incentives shall be considered in connection with service contracts for performance** of objectively measurable tasks when quality of performance is critical and incentives are likely to motivate the contractor. [emphasis added]

AMCOM Calculation of Material Cost Savings

AMCOM officials calculated a total material cost reduction of \$23.7 million based on 27 repair programs that showed reduced material charges during the performance period. To calculate the material cost reduction, AMCOM officials relied on total material costs of each repair program for the baseline and performance periods. AMCOM officials did not consider any increases in labor or material in its calculation. We focused our review of AMCOM's calculations on six repair programs, which had a total reduction of \$23.8 million before a lump-sum adjustment of \$2.2 million decreased the total calculation.

Table 6 shows AMCOM calculations of material cost savings for the six repair programs we reviewed. The repair programs highlighted below are discussed in more detail in the following sections.

Table 6. “Claimed” Material Savings on Six Repair Programs

Repair Program	Qty	Unit Price (material)		Total (millions)		Material Savings ¹ (millions)	Percent ²
		Baseline	Performance	Baseline	Performance		
Hydraulic Accumulator (RB234)	110	\$931.49	\$(1,243.49)	\$ 0.1	\$ (0.1)	\$0.2	(233.5)
Servo Assembly (RB212)	521	10,608.08	3,955.29	5.5	2.1	3.5 ³	(62.7)
Main Helicopter Transmission (CB494)	180	183,547.08	94,070.26	33.0	16.9	16.1	(48.7)
Mechanical Transmission (RB210)	177	32,950.12	17,882.74	5.8	3.2	2.7 ³	(45.7)
Engine Inlet Assembly (AB431)	183	9,793.38	5,991.42	1.8	1.1	0.7	(38.8)
Shock Absorber (RB246)	225	3,938.87	2,603.09	0.9	0.6	0.6 ⁴	(33.9)
Total				\$47.2³	\$23.7³	\$23.8	

¹These amounts do not include a \$2.2 million adjustment applied as a lump sum to the total savings calculation.

²Because the baseline and performance totals are shown in one decimal place, slight rounding inconsistencies may exist in the percent calculations.

³Slight rounding inconsistencies exist because auditor calculations included decimal places.

⁴AMCOM officials calculated material cost savings of \$0.6 million; however, the material cost savings should have been \$0.3 million.

Calculations Were Based on Unreliable Data

AMCOM officials did not use reliable data in their calculations, which determined that material costs were reduced by \$23.7 million. Specific deficiencies with the data were the substantial amount of incomplete (no material price or quantity) and negative transactions as well as lower material prices procured from sources outside the CCAD/Sikorsky contract. In addition, AMCOM’s approach failed to adequately measure material consumption quantities to account for improved performance. Instead, AMCOM officials based their calculations on questionable total program material costs captured in LMP.

Government Accountability Office (GAO) Report No. GAO-10-461, “Actions Needed to Improve Implementation of the Army Logistics Modernization Program,” April 30, 2010, found that the Army was unable to ensure that the data used by LMP were of sufficient

quality to enable the depots to perform their day-to-day missions after LMP became operational. As a result of these data quality issues, depot personnel had to develop and use manual work-around processes until they could correct the data in LMP, which prevented the Army from achieving the expected benefits from LMP. Furthermore, GAO Report No. GAO-11-139, “Additional Oversight and Reporting for the Army Logistics Modernization Program Are Needed,” November 18, 2010, stated that data quality issues persist and have prevented CCAD from achieving expected benefits from LMP.

**Program RB234 - Hydraulic Accumulator (NSN 1650-01-222-4316):
LMP Data Showed Negative Program Material Charges**

AMCOM officials calculated a total material cost reduction of \$239,247 for repair program RB234 for their hydraulic accumulator. Accordingly, AMCOM officials paid Sikorsky \$119,624, or half of the total reduction calculated. The baseline data showed a total material cost of \$102,464 for 110 hydraulic accumulators. LMP data used in the performance calculation

LMP data used in the performance calculation showed a negative material cost of \$(136,784), although 110 hydraulic accumulators were repaired during the period.

showed a negative program material cost of \$(136,784), although 110 hydraulic accumulators were repaired during the period. Repairing a part with negative material charges is not possible. We asked CCAD officials to explain what caused the material charges to become negative and whether these charges were accurate. Although CCAD officials stated that they relied on LMP data in the calculation, they did not explain what caused the material charges to be negative during the period. Figure 5 shows the hydraulic accumulator.

Figure 5. Hydraulic Accumulator



Based on our review of LMP data, the negative program material charges primarily relate to components that were not procured under the CCAD/Sikorsky contract. Specifically, the data showed that there were 110 components (not procured under the contract) that had a cumulative negative value of \$(239,843). The LMP data also showed 46 components with a cumulative value of \$29,016 that were on the CCAD/Sikorsky contract. In addition, the LMP data included a lump-sum transfer of \$74,043 from the Army’s previous material management system: Standard Depot System (SDS).

Table 7 summarizes LMP transactions for the hydraulic accumulator used to support the total material costs.

Table 7. LMP Data for Hydraulic Accumulator

Description	Parts	Amount
Components not on contract	110	\$(239,843)
Components on contract	46	29,016
Transfer from SDS	Not available	74,043
Total		\$(136,784)

For example, one component not procured under the CCAD/Sikorsky contract that showed negative material charges was the variable resistor (NSN 5905-01-406-7692). LMP data showed a negative material charge of \$(37,745) but had no quantity. Clearly, the data AMCOM officials used in their calculation of total material cost were not reliable to measure Sikorsky’s performance. The negative charges for the 110 components not procured under the contract resulted in an overall negative program material cost for the hydraulic accumulator.

Carrier Assembly (NSN 1615-01-497-7257) Used on Program CB494: LMP Data Did Not Relate to Material Consumption Quantities and Showed Negative or Incomplete Transactions

AMCOM officials calculated \$5.2 million in cost reductions for the carrier assembly, based on total material costs. The baseline data showed a total material cost of about \$5.1 million using 140 carrier assemblies in the repair of 180 main helicopter transmissions (program CB494). The performance data from LMP showed a total negative material cost of \$(55,642) with a negative quantity of (4) carrier assemblies used in the repair of 180 main helicopter transmissions. This resulted in a material cost reduction of over 100 percent, which is not possible. Consequently, AMCOM officials paid Sikorsky half of the total reduction, or \$2.6 million. Table 8 outlines the DOF, actual quantities, and material costs for the carrier assembly, and Figure 6 shows a carrier assembly.

Table 8. “Claimed” Material Savings for the Carrier Assembly

Description	Baseline	Performance	Difference	
			Amount	Percent
DOF quantity (expected usage)	144	144	0	0
Actual quantity	140	(4)	(144)	(102.9)
Unit price for material (rounded)	\$36,777	\$13,911	\$(22,866)	(62.2)
Amount	\$5,148,740	\$(55,642)	\$(5,204,383)	(101.1)
Incentive payment			\$2,602,191	

Figure 6. Carrier Assembly



AMCOM officials relied on questionable LMP data, which did not relate to expected or historical material consumption quantities. For example, LMP data included a negative quantity of (4) carrier assemblies, when the

LMP data included a negative quantity of (4) carrier assemblies, when the DOF calculated a need for 144.

DOF calculated a need for 144. As shown in Table 8, the DOF for both the baseline and performance periods calculated a need of 144 carrier assemblies to repair 180 main helicopter transmissions. In the

baseline period, 140 carrier assemblies were used, which related to the DOF quantity. However, the LMP data that AMCOM relied on did not relate to the DOF quantity and showed a negative quantity of (4) carrier assemblies used in the performance period. Again, it is not possible that a negative material consumption quantity could be accurate to repair 180 main helicopter transmissions. By relying on questionable LMP data on total material costs instead of measuring material consumption quantities, AMCOM failed to uncover the erroneous data in LMP.

Another problem of relying on total material costs from LMP was that substantial negative or incomplete transactions and their effect on material prices went undetected. For example, the LMP data showed incomplete material prices for 205 (101 positive/(104) negative) transactions for the carrier assembly. The remaining 21 transactions (10 positive/(11) negative) had unit prices ranging from \$34,001.81 to \$44,822.00. As a result, the LMP data showed a total negative material cost of \$(55,642), based on a negative quantity of (4) at an average unit price of \$13,910.55. Meanwhile, the SDS data did not contain any negative or incomplete transactions. Specifically, the baseline data from SDS showed 140 carrier assemblies at an average unit price of \$36,776.72, based on several different material prices ranging from \$32,694.05 to \$61,951.00.

Table 9 compares the transactions captured in LMP and SDS.

Table 9. Carrier Assembly Comparison of SDS and LMP Data

SDS			LMP		
Quantity	Unit Price	Total	Quantity	Unit Price	Total
11	\$61,951.00	\$681,461	9	\$44,822.00	\$403,398
7	37,929.90	265,509	1	34,001.81	34,002
106	34,704.39	3,678,665	101	0	0
16	32,694.05	523,105	(11)	44,822.00	(493,042)
			(104)	0	0
140	\$36,776.72	\$5,148,740	(4)	\$13,910.55	\$(55,642)

By basing its calculation on unreliable LMP total material costs instead of measuring material consumption quantities, AMCOM officials failed to detect incomplete transactions that lowered the material costs, resulting in an erroneous incentive payment calculation. Again, the intent of the clause was for Sikorsky to reduce new material consumption. To appropriately measure reduced material usage, material prices would need to be constant.

**Pinion (NSN 3020-01-088-3673) Used on Program CB494:
LMP Data Did Not Relate to Material Consumption Quantities and
Included Lower Material Prices From Other Sources**

AMCOM officials calculated \$1.9 million in cost reductions for the pinion, based on total material costs. The baseline data showed a total material cost of about \$2.4 million, using 200 pinions in the repair of 180 main helicopter transmissions (program CB494). The performance data from LMP showed a total material cost of \$467,579 for 142 pinions used in the repair of 180 main helicopter transmissions. As a result, AMCOM officials paid Sikorsky half of the total reduction, or \$954,823.

The DOF for both baseline and performance periods calculated a need for 360 pinions to repair 180 main helicopter transmissions. However, significantly lower quantities of 200 and 142, respectively, were used during those periods. Again, AMCOM officials need to validate material consumption quantities and ensure that they track to the DOF.

Table 10 outlines the DOF, actual quantities, and material costs for the pinion; and Figure 7 shows a pinion.

Table 10. “Claimed” Material Savings on the Pinion

Description	Baseline	Performance	Difference	
			Amount	Percent
DOF quantity (expected usage)	360	360	0	0
Actual quantity	200	142	(58)	(29.0)
Unit price for material (rounded)	\$11,886	\$3,293	\$(8,593)	(72.3)
Amount	\$2,377,224	\$467,579	\$(1,909,645)	(80.3)
Incentive payment			\$954,823	

Figure 7. Pinion



Because AMCOM officials relied solely on total material costs, lower material prices procured from other sources outside the CCAD/Sikorsky contract, which influenced the calculation, went undetected. For example, the LMP data showed 142 pinions were used at an average unit price of \$3,292.81. The average unit price of \$3,292.81 used in the calculations was primarily based on material procured from other sources at a significantly lower unit price of \$1,576.00.

The average unit price of \$3,292.81 used in the calculations was primarily based on material procured from other sources at a significantly lower unit price of \$1,576.00.

142 pinions were used at an average unit price of \$3,292.81. The average unit price of \$3,292.81 used in the calculations was primarily based on material procured from other sources at a significantly lower unit price of \$1,576.00.¹⁴

The 2009 CCAD/Sikorsky contract unit price of \$7,340.24 was 365.8 percent higher than the \$1,576.00 unit price.

¹⁴ The \$1,576.00 unit price represents the 2009 moving average price from LMP and was based on previous AMCOM procurements.

The baseline data showed 200 pinions were used at an average unit price of \$11,886.12, which was based largely on the 2007 CCAD/Sikorsky contract unit price of \$14,544.64. Table 11 shows a comparison of transactions captured in SDS and LMP for the pinion. The unit prices highlighted in yellow are the main drivers for the average material costs.

Table 11. Pinion Comparison of SDS and LMP Data

SDS			LMP		
Quantity	Unit Price	Total	Quantity	Unit Price	Total
128	\$14,544.64	\$1,861,714	34	\$7,340.24	\$249,568
46	7,057.92	324,664	146	1,576.00	230,096
26	7,340.24	190,846	434	0	0
			(6)	1,576.00	(9,456)
			(2)	1,314.38	(2,629)
			(464)	0	0
200	\$11,886.12	\$2,377,224	142	\$3,292.81	\$467,579

By relying on total material costs, AMCOM officials failed to realize that lower material prices procured outside the CCAD/Sikorsky contract lowered the material costs, resulting in an erroneous incentive. Again, the intent of the clause was for Sikorsky to reduce new material consumption. Therefore, fluctuations in material prices should not be factored into the calculations and should remain constant, to adequately measure material consumption quantities.

Given the significant errors contained in AMCOM's calculation, the incentive payment of \$11.8 million is unjustifiable. *The Executive Director, Army Contracting Command - Redstone Arsenal (ACC-RSA) needs to instruct the contracting officer to obtain a refund of \$11.8 million from Sikorsky for the material cost reduction incentive.*

[Recommendation B.1]

Depot Labor Costs Were Not Considered

The cost reduction methodology used by AMCOM officials in the CCAD/Sikorsky contract did not consider depot labor (hours) costs. The material cost reduction clause identified specific areas of opportunity for reducing material costs related to maintaining accountability of assets, repairing instead of replacing parts, and extending useful life of parts. However, AMCOM officials did not include an equal consideration of depot labor costs even though some methods recommended to reduce material costs would directly increase labor costs. For example, repairing parts instead of replacing them will result in increased depot labor costs, as parts that used to be replaced are now being repaired.

Based on the review of budgeted and expended labor for 68 of the 70 repair programs, we calculated that 50 repair programs experienced total increases in labor costs of \$27.9 million while 18 repair programs experienced total reduced labor costs of \$1.8 million.

Table 12 shows that depot labor costs increased by \$26.1 million for the 68 repair programs.

Table 12. Depot Labor Costs Significantly Increased

Labor	Number of Programs	Amount* (millions)
Increases	50	\$27.9
Savings	18	(1.8)
No Data	2	-
Total	70	\$26.1

*Depot labor costs were calculated based on the 2010 CCAD labor rate of \$105.63.

Had depot labor costs received equal consideration as a cost control, Sikorsky would not have received an incentive payment because labor cost increases of \$26.1 million would

Had depot labor costs received equal consideration as a cost control, Sikorsky would not have received an incentive payment because labor cost increases of \$26.1 million would offset AMCOM's calculated material savings of \$23.7 million.

offset AMCOM's calculated material savings of \$23.7 million. One example of significant labor increases occurred for repair program CB494, main helicopter transmission (NSN 1615-01-503-3115). Specifically, AMCOM officials had calculated a total material cost reduction of \$16.1 million, resulting in an incentive payment of \$8.1 million

to Sikorsky. However, depot labor hours increased by 64,269.6 (110,739.6 hours budgeted versus 175,009.2 hours expended), which equates to about \$6.8 million of increased labor costs using the FY 2010 CCAD labor rate of \$105.63 per hour. Had AMCOM officials considered both labor and material costs to calculate its incentive payment, Sikorsky would have received a reduced payment totaling about \$4.7 million (\$16.1 million - \$6.8 million = \$9.3 million * 50 percent share = \$4.7 million) for this repair program. AMCOM's current strategy will not effectively control depot costs until labor costs are considered.

Material Increases Were Also Not Considered

The material cost reduction calculation did not include repair programs that experienced material cost increases because the contract clause required that the increases be removed. Although the intent of the clause was to incentivize Sikorsky to assist CCAD in reducing depot material costs, AMCOM officials agreed to zero out any increase in material costs from its calculation. Therefore, Sikorsky had no disincentive for failing to control material costs throughout the depot and could pick and choose which programs to control material costs. As a result, the clause failed to reduce material costs to the depot.

Overall, the clause has not been effective at reducing material costs to the depot, as more than 60 percent of the programs experienced material cost increases or had no reduction. Specifically, AMCOM officials calculated \$23.7 million of reductions for 27 of 70 (38.5 percent) repair programs, \$15.1 million of increases for 37 of 70 (52.9 percent) repair programs, and no change in material costs for 6 of 70 (8.6 percent) repair programs. CCAD officials agreed that material cost increases should be considered in the calculation but the current contract requires the removal of increases and the Army must comply with negotiated contract terms. If AMCOM officials had considered the \$15.1 million increase in material costs, the overall incentive payment would have been reduced by \$7.5 million, from \$11.8 million to \$4.3 million (Table 13).

If AMCOM officials had considered the \$15.1 million increase in material costs, the overall incentive payment would have been reduced by \$7.5 million, from \$11.8 million to \$4.3 million.

Table 13. Total Material Cost Reduction Incentive Payment
(millions)

Material Cost	Number of Programs	AMCOM Data
Savings	27	\$(23.7)*
Increases	37	15.1
No change	6	-
Total	70	\$(8.6)
Incentive payment		\$4.3
* A \$2.2 million adjustment for mischarge allocations was applied as a lump sum to the total savings calculation.		

Repair program B362 for the main rotor blade (NSN 1615-01-106-1903) is an example of a repair program that experienced significant cost increases.¹⁵ For the baseline period, the main rotor blade had total material charges of \$14.5 million. However, the 2009 performance period data from LMP showed material charges of \$23.5 million, resulting in a total material increase of about \$9.0 million. However, the clause required AMCOM officials to eliminate the increase in material charges from their calculation, which unfairly inflated Sikorsky’s incentive payment. A significant driver in increased material costs was the unreasonable price increase for the titanium blade sheath assembly (sample 1 - NSN 1615-01-390-0740). The price of the titanium blade sheath for the follow-on contract (2008) increased 114.3 percent (from \$7,936.57 to \$17,004.39) from the 2007 CCAD/Sikorsky contract price.

¹⁵ The main rotor blade has two separate repair programs: RB362 and FB362. We combined the total material costs for each in our calculations.

Changes Are Needed to Control Depot Costs

The incentive clause established in the CCAD/Sikorsky contract did not effectively control costs at the depot. We calculated that depot costs increased by \$17.5 million, when increased labor (\$26.1 million) and material costs (\$15.1 million) are factored into the calculation. When AMCOM's unjustified payment to Sikorsky of \$11.8 million is included, overall depot costs increased by \$29.3 million (Table 14).

Table 14. Comparison of Material and Labor Costs for Repair Programs
(millions)

Description	No. of Programs	Material	Labor ¹	Total
<i>Material Cost Savings</i>				
Labor costs increased	21	\$(24.7)	\$11.1	\$(13.6)
Labor costs reduction	6	(1.1)	(0.9)	(2.0)
Adjustment ²		2.2		2.2
Subtotal	27	\$(23.7)³	\$10.2	\$(13.4)
<i>Material Cost Increases⁴</i>				
Labor costs increased	29	\$14.1	\$16.7	\$30.9 ³
Labor costs reduction	12	0.9	(0.9)	0
Subtotal	41	\$15.1³	\$15.8	\$30.9³
Total cost	68	\$(8.6)	\$26.1³	\$17.5
Incentive payment to Sikorsky				\$11.8
Final cost increase				\$29.3
¹ We calculated depot labor costs using 2010 CCAD labor hour rate of \$105.63. ² AMCOM applied a lump-sum adjustment for mischarge allocations to the material savings. ³ Slight rounding inconsistencies exist because auditor calculations included decimal places. ⁴ Includes four programs that had labor data, but their material costs remained the same for both the baseline and performance periods.				

For incentive clauses to be effective there must be an equal penalty or disincentive for nonperformance tied to an incentive for improved performance (Federal Acquisition Regulation 16.402). Immediate changes to the CCAD/Sikorsky contract incentive clause are needed to account for increases in labor and material costs. AMCOM officials also need to approach its measurement of improved performance by adequately measuring material consumption quantities as originally intended.

The contracting officer needs to immediately remove the material cost reduction clause from the contract unless reliable data are used, which

- *relate to DOFs;*
- *remove lower material prices procured from sources outside the contract; and*
- *provide for equal consideration of labor and material cost increases.*

[Recommendation B.2]

Recommendations, Management Comments, and Our Response

B. We recommend that the Executive Director, Army Contracting Command – Redstone Arsenal, instruct the contracting officer to:

1. Obtain a refund of \$11.8 million from Sikorsky for the material cost reduction incentive.

Department of the Army Comments

The Principal Assistant Responsible for Contracting, ACC-RSA, partially agreed. She stated that the focus of the material cost reduction clause was to reduce material cost to the depot. Further, she stated that the intention was to include an incentive for material decreases and disincentive for material increases. However, in order to obtain agreement to a year-to-year baseline adjustment, the Army did not include a disincentive for material increases. She also stated that there was evidence of a benefit to the Government from the yearly baseline adjustment of the material costs because 8 of the 26 programs completed in 2010 reflected reductions of \$1.2 million. She agreed that some programs reflected increases in material costs and stated that ACC is investigating these programs to determine the reasons for the increases. Further, she stated that if Sikorsky “should or could have influenced for reductions, [ACC] will take appropriate action.” She stated that with the implementation of LMP, CCAD had to make manual adjustments to properly account for material and that the data used to calculate the incentive payment reflected these adjustments. She stated that under the current terms of the contract and based on a review of all current data, Sikorsky has earned the incentive payment of \$11.8 million.

She did not agree with the calculations that included depot labor costs as part of measuring performance of this contract. She stated that there was no evidence that the increased labor costs resulted from this contract and that Sikorsky does not have the ability to substantially influence depot labor required for maintenance.

The Principal Assistant Responsible for Contracting stated that the overall concept of a reduction of DOFs is that there should be a corresponding reduction in material required. She also stated a significant portion of DOF changes can be contributed to some process improvements that Sikorsky brought to the depot. Further, DOF changes from 2009 to 2010 reflect an overall reduction of \$21.8 million.

The Principal Assistant Responsible for Contracting also stated that the depot has implemented an improvement going forward to develop fully trained contracting officer representatives to provide a more detailed level of contract oversight and improve processes.

Our Response

Comments from the Principal Assistant Responsible for Contracting, ACC-RSA, were not responsive. We disagree that the available data show that Sikorsky has earned an

incentive payment of \$11.8 million. As shown in the report, the calculation is based on unreliable data, which include negative material program charges and quantities as well as incomplete transactions that are obvious errors and warrant corrective action.

In addition, we disagree that the tradeoff of the readjustment of baselines yearly in return for excluding material increases (equal disincentive) represents the best value for the Government. Further, the Army's position of focusing solely on material decreases, while ignoring material increases, will not adequately measure performance or ensure proper use of DoD and taxpayer funds.

We request that the Principal Assistant Responsible for Contracting, ACC-RSA, reconsider her position and provide additional comments in response to the final report.

2. Immediately remove the material cost reduction clause from the contract unless reliable data are used, which relate to depot overhaul factors, remove lower material prices procured from sources outside the contract, and provide for equal consideration of labor and material cost increases.

Department of the Army Comments

The Principal Assistant Responsible for Contracting, ACC-RSA, partially agreed. She stated that a suspension of the material cost reduction incentive will be negotiated for the remaining FY 2011 and FY 2012 programs pending the results of the investigation regarding the increases in material costs. She also stated that she agreed with the IG that there was no contract disincentive even though it is a preferred method in performance-based clauses. She further stated that if Sikorsky "should or could have influenced for reductions, [ACC] will request an appropriate refund." Again, she stated that the Army did obtain benefit from recalculating the baseline year-to-year. In addition, she stated that the results of the Army evaluation of performance data are viewed to be accurate.

Our Response

Comments from the Principal Assistant Responsible for Contracting, ACC-RSA, were not responsive. Although a pause for the remaining contract period is a step in the right direction, the response failed to meet the intent of the recommendation.

We disagree with the Army's position of focusing solely on material decreases while ignoring any and all material increases when measuring performance. We also disagree with the Army's contention that Sikorsky does not have the ability to substantially influence depot labor. As shown in the report, some methods to reduce material costs will directly result in increased labor costs. Further, the contract statement of work requires Sikorsky to provide recommendations for improving production, based on best commercial practices, to include modifying existing and incorporating new work instructions. AMCOM is paying about \$30 million annually under the contract for TELSS support for the Blackhawk helicopter [REDACTED]

[REDACTED] Therefore, it seems prudent that the Army would measure the impact that Sikorsky has on its labor costs in addition to material costs. We request that the Principal Assistant Responsible for Contracting,

ACC-RSA, provide additional comments in response to the final report, which address the intent of the recommendation. Specifically, the comments should address how the quality of data will be improved, adding an appropriate disincentive and providing for equal consideration of all depot costs to ensure the measurement of Sikorsky's impact on performance.

~~FOR OFFICIAL USE ONLY~~

Finding C. Splitting Requirements for Consumable Items Was Not Cost-Effective

The CCAD/Sikorsky contract was splitting instead of consolidating procurement and material sustainment responsibilities for consumable items purchased on the contract. Consequently, Sikorsky and either the Army or DLA were procuring and managing the same items, and Sikorsky was procuring items from DLA and charging AMCOM higher prices. Specifically, Sikorsky had responsibility for procuring and managing items used at CCAD while either the Army or DLA had responsibility for procuring and managing the same items to meet requirements outside of CCAD. This occurred because AMCOM officials had not:

- developed an effective procurement and material management strategy that addressed the most cost-effective source of supply for consumable items, and
- addressed an appropriate markup for Sikorsky on items procured from DLA.

Using the DoD EMALL, we identified that DLA had sufficient inventory to satisfy annual CCAD/Sikorsky contract requirements for 3,267 items and that the total contract price for these items was \$7.6 million, or 85.1 percent, higher than the total DLA price.¹⁶ Although AMCOM officials were able to reduce contract prices for 29 items by \$217,842 by procuring 2010 requirements from DLA inventory, we question the decision to pay a full markup [REDACTED] to Sikorsky on these items. Further, from 2008 to 2010, Sikorsky made a 58.7 percent profit, or \$930,760, on 449 items purchased from DLA, which were sold to CCAD at the contract price.

CCAD/Sikorsky Contract Procurement Strategy

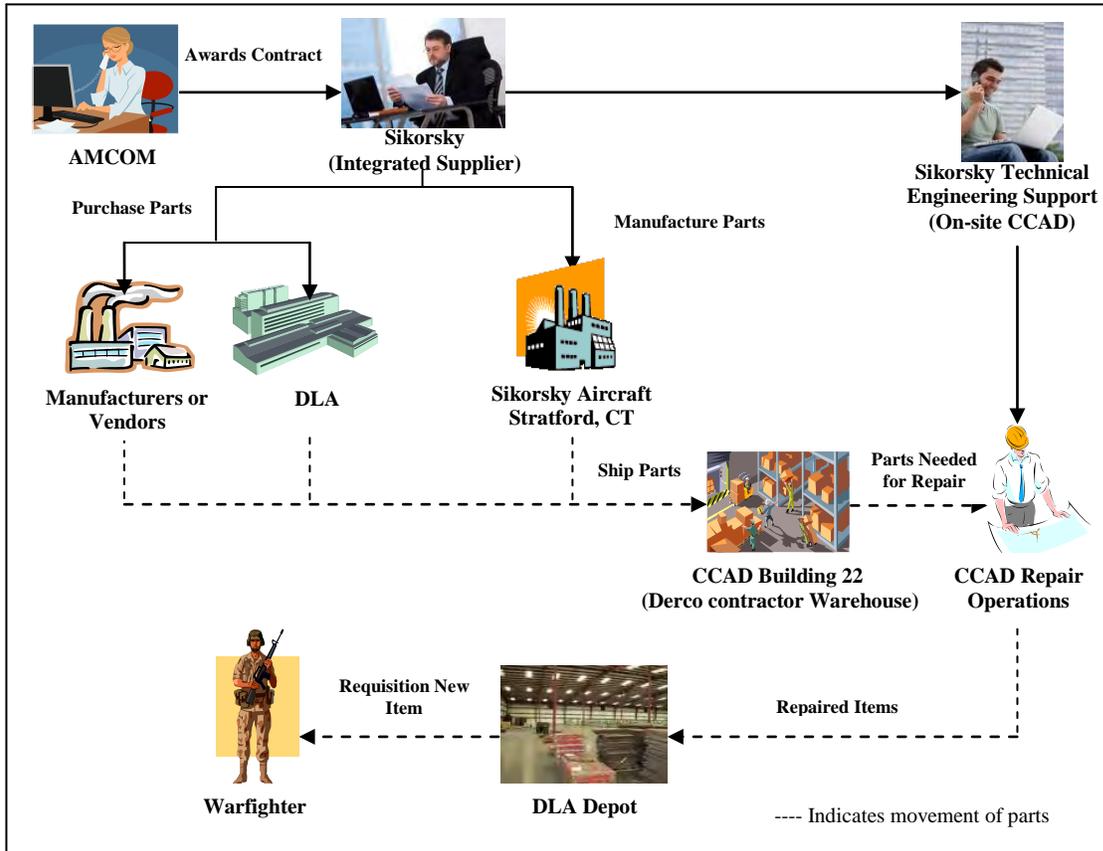
Purchases for CCAD Requirements

Since December 2002, AMCOM has procured from Sikorsky services and supplies to support CCAD in the overhaul and repair of the Blackhawk helicopter weapon system. The March 26, 2008, justification and approval for other than full and open competition on the CCAD/Sikorsky contract stated that no other company had the ability to provide 100 percent of items required while also providing technical, engineering, and logistical support services. The justification and approval further stated that AMCOM and DLA would continue to serve as the national inventory control point to support customers other than CCAD.

¹⁶ In addition, we identified another 748 items for which the total contract price was \$14.5 million, or 64.3 percent, higher than the total DLA price, but DLA did not have sufficient inventory to meet contract requirements, and 1,990 items for which the total contract price was \$12.5 million less than the total DLA price.

Figure 8 shows the material flow under the CCAD/Sikorsky contract. Under the contract, Sikorsky is responsible for supplying materials to meet CCAD requirements.

Figure 8. Purchases for CCAD Requirements

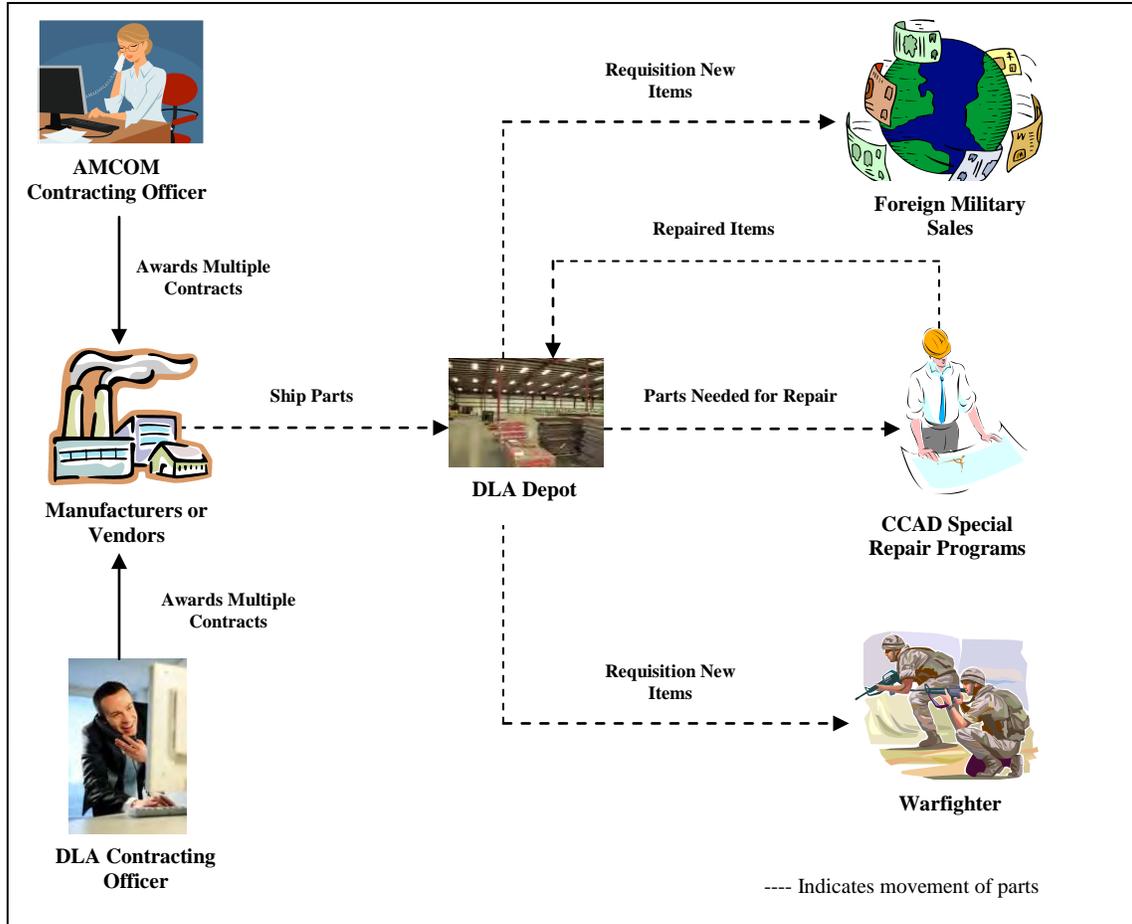


AMCOM and DLA Purchases for Other Customers

Historically, either AMCOM or DLA procured different consumable items which were used to meet CCAD and other customer requirements. Since December 2002, AMCOM has relied on Sikorsky to provide material for CCAD requirements with technical, engineering, and logistical support services for the Blackhawk helicopter. However, DLA and the Army continue to procure the same items to support customers other than CCAD.

Figure 9 shows the material flow of items managed by either AMCOM or DLA to support customers other than CCAD.

Figure 9. AMCOM and DLA Purchases for Other Customers



DoD Needs an Effective Strategy for Procuring Material

DoD did not have an effective material management strategy for consumable items to promote economic order quantities and competition between contractors and DLA. The consumable item transfers and other consolidation efforts were supposed to give more buying power (leverage) to DLA through the transfer of procurement management and related support functions. However, because Sikorsky, AMCOM, and DLA were procuring different quantities of the same items, leverage was not fully realized.

Economic Order Quantities Were Not Considered

Procuring items in economic order quantities is a statutory requirement. Section 2384a, title 10, United States Code, “Supplies: economic order quantities,” states that agencies “...shall procure supplies in such quantity as (A) will result in the total cost and unit cost most advantageous to the United States where practicable.” Having more than one entity

procuring the same items is not a best business practice and frequently does not allow DoD to take advantage of economic order quantities. Table 15 shows examples where higher quantities procured resulted in lower unit prices.

Table 15. Examples of DLA Items With Economic Order Quantity Issues

Sample Number	2010 Sikorsky Contract Quantity	Sikorsky Unit Price	Historical Procurement Quantity	Historical Unit Price*	Price Difference (Percent)
Sikorsky Contract Price Was More Than DLA Price					
87	84	\$3,227.75	2,369	\$1,512.25	113.4
111	409	514.60	1,236	143.72	258.1
330	304	284.46	906	8.37	3,298.6
DLA Price Was More Than Sikorsky Contract Price					
192	51	\$2,921.38	4	\$6,720.00	130.0
215	2,640	50.93	2	106.91	109.9
229	2,546	50.93	7	105.61	107.4
*Includes DLA cost recovery rate.					

In addition, a specific example for an AMCOM part (transferred to DLA in January 2011) where economic order quantities affected prices is the electrical ring assembly (Sample 71 - NSN 5977-01-432-9247) used on the Blackhawk helicopter. In November 2008, AMCOM procured 642 electrical ring assemblies at a unit price of \$8,200.00. During the same period, Sikorsky procured [REDACTED] parts from the same supplier at unit prices [REDACTED] or differences [REDACTED]. The annual demand for customers other than CCAD for this item is 349. Since the CCAD annual requirement (less than 20 on average) is too small to be economical, it would make sense for the requirement to be combined with the other user demands to receive a lower, more economical price. Figure 10 shows an electrical ring assembly and Table 16 shows the pricing information.

Figure 10. Sample 71 – Electrical Ring Assembly



~~FOR OFFICIAL USE ONLY~~

Table 16. Pricing Information for the Electrical Ring Assembly

	Date	Quantity	Unit Price	Percent Difference
AMCOM procurement (Moog)	11/2008	642	\$ 8,200.00	
Average Sikorsky price	2008-2010			
Average Sikorsky burdened price	2008-2010			
Sikorsky purchase order - 5500069731	4/16/2010			
Burdened Sikorsky purchase order - 5500069731	4/16/2010			
CCAD/Sikorsky contract negotiated/procured quantity	2008	6/17	17,116.32*	
	2009	11/10	17,791.36	
	2010	11/7	18,503.02	
	2011	28	19,243.14	
	2012	28	20,012.86	
*Weighted average of the two bridge contract unit prices based on contract quantity.				

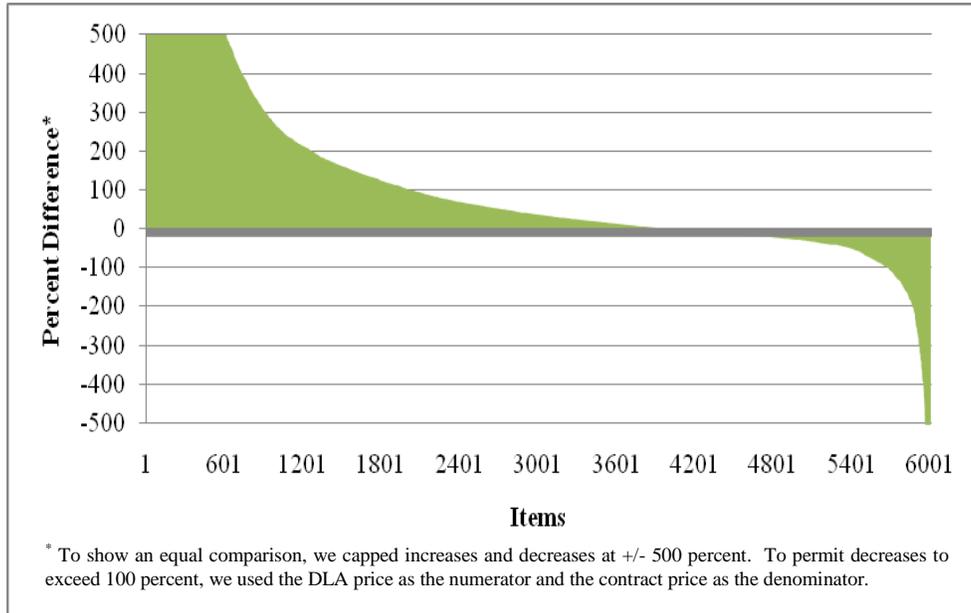
The DoD EMALL Is a Valuable Pricing Tool and Can Stimulate Competition Between DLA and Sikorsky

We compared CCAD/Sikorsky 2010 contract prices with the DoD EMALL prices (DLA standard unit price) for 6,005 of 7,093 total items on the CCAD/Sikorsky contract.¹⁷ The price analysis showed that a substantial reduction of prices could be obtained if items were procured from DLA rather than from Sikorsky under the CCAD/Sikorsky contract.

¹⁷ We excluded a total of 1,088 items because they had no demand and no inventory or there was no data available for comparison in the DoD EMALL.

As shown in Figure 11, the CCAD/Sikorsky contract prices were significantly higher than the DLA prices for a large number of items being procured under the CCAD/Sikorsky contract.

Figure 11. The CCAD/Sikorsky Contract Prices Were Significantly Higher Than DLA Prices



Specifically, we identified 3,267 items on the CCAD/Sikorsky contract that cost \$16.4 million, although the DLA price was only \$8.9 million—a difference of \$7.6 million,¹⁸ or 85.1 percent (110.2 percent median)—and DLA had sufficient inventory of the items to satisfy annual contract requirements. The median or item 1,634 of the 3,267 items was 110.2 percent higher than the DLA price; however, because many of the items had economic order quantity issues and were low-dollar items, the average was only 85.1 percent. For example, DoD EMALL shows that for a light lens (NSN 6220-01-155-0859), DLA had 3,532 in inventory valued at \$49.98 each with an annual demand of 5, while the 2010 CCAD/Sikorsky contract requirement was 2 pieces at a unit price of \$628.13, or 1,156.8 percent higher than the DLA price. We see no reason for the Army to procure the item from Sikorsky rather than DLA to support CCAD requirements.

We identified another 748 items priced at \$37.1 million, but the DLA price was only \$22.6 million: a difference of \$14.5 million, or 64.3 percent (76.3 percent median). However, DLA did not have enough inventory to meet contract requirements. We also identified 1,990 items for which the contract price was only \$28.8 million, and the DLA price was \$41.3 million, or 43.4 percent (28.4 percent median). AMCOM officials could make a case to procure these items from Sikorsky after excess DLA inventory was depleted.

¹⁸ Slight rounding inconsistencies exist because auditor calculations include decimal places.

As shown in Table 17, DLA had thousands of items in inventory that could satisfy CCAD/Sikorsky contract requirements at significantly lower prices.

Table 17. DLA Inventory Could Satisfy CCAD Requirements

Description	Number of Items	DLA Inventory (millions)	2010 Total Price		Difference	
			Contract (millions)	DLA (millions)	Amount	Percent
<i>DLA had sufficient inventory to satisfy annual contract requirements</i>						
Contract unit price is higher than DLA price.	3,267	\$ 98.3	\$ 16.4	\$8.9	\$7.6	85.1
						Median
<i>DLA had insufficient inventory to satisfy annual contract requirements</i>						
Contract unit price is higher than DLA price.	748	7.6	37.1	\$22.6	\$14.5	64.3
						Median
DLA price is higher than contract unit price.	1,990	61.1	28.8	\$41.3	\$12.5	43.4
						Median
Comparable data were not available.	1,088	6.3	83.1			
Total	7,093	\$173.2*	\$165.4			

* Slight rounding inconsistencies exist because auditor calculations include decimal places.

The contracting officer needs to include a contract clause that requires Sikorsky to obtain consumable items from DLA as the first source of supply when cost-effective and practical. [Recommendation C.1]

The DoD EMALL was an extremely effective tool for performing a basic price analysis of contract prices and determining whether DLA had the best price and sufficient

DoD needs to adopt a strategy that allows DLA to compete with contractors on Services requirements.

inventory to meet contract requirements or whether the contractor had better prices. DoD needs to adopt a strategy that allows DLA to compete with contractors on Services requirements. Using the DoD EMALL in acquisition planning would have also uncovered much of the excess

inventory discussed in Finding A and pricing problems that will be discussed in a separate report on the CCAD/Sikorsky contract.

Sikorsky Made Excessive Profits on Purchases From DLA

Purchases from DLA Considered Contractor-Furnished Material

The CCAD/Sikorsky contract encouraged Sikorsky to use DLA as a source of supply, and it allowed these items to be treated as contractor-furnished material instead of Government-furnished material, which permitted Sikorsky to charge the negotiated

contract price regardless of the cost of obtaining the item from DLA. Specifically, contract clause H-4, “Government Source of Supply,” stated:

The contractor and subcontractor are authorized and encouraged to use DLA as a source of supply IAW [in accordance with] FAR Clause 52.251-1 for DLA managed items that are determined to be the best value to the Government in terms of price, delivery, and quality....Any acquisitions from DLA will be a direct transaction between Sikorsky Aircraft Corporation and DLA. Parts and supplies acquired from DLA are considered contractor acquired property rather than Government furnished property.

DLA requisition data showed that Sikorsky procured 449 items for \$1.6 million from DLA to satisfy CCAD requirements from 2008 through 2010. However, Sikorsky charged AMCOM the negotiated contract price of \$2.5 million for the 449 items and made a profit of 58.7 percent, or \$930,760, on the items that it bought from DLA. Table 18 shows the excessive profit made on purchases from DLA by contract year.

Table 18. Sikorsky Excessive Profit on Purchases From DLA (Clause H-4)

Contract Year	Total Price*		Excessive Profit	
	DLA	Contract	Amount	Percent
2008	\$ 991,335	\$1,508,944	\$517,609	52.2
2009	133,118	222,921	89,803	67.5
2010	462,382	785,730	323,348	69.9
Total	\$1,586,834	\$2,517,594	\$930,760	58.7

*Slight rounding inconsistencies exist because auditor calculations include decimal places.

The contracting officer needs to request that Sikorsky provide a refund of \$930,760 for excessive profits charged to purchases from DLA. [Recommendation C.2]

Annual Price Adjustments on Purchases from DLA

AMCOM officials attempted to receive lower prices when Sikorsky was procuring from DLA in a contract clause that called for an annual readjustment of prices. However, Sikorsky was the final decision maker on which items were selected to be procured from DLA and was allowed to charge its full burden rate [REDACTED] which included profit [REDACTED] to the DLA sell price. Specifically, contract clause H-21, “Price Adjustments for DLA Supplied Material,” stated:

In anticipation of the contractors potential partnering agreement with the DLA to supply material for the performance of this contract, the parties agree to adjust the unit pricing in Attachments 2 and 3 on an annual basis for specific items that the contractor purchases from the DLA at a lower price. This adjustment will be made for a select number of components for the first year of the contract and for a more comprehensive list of components for each succeeding year.

Contract unit prices for 29 items were reduced for 2010 contract requirements, which resulted in total price reduction of \$217,842. Although, AMCOM officials were able to reduce contract prices, we question the appropriateness of paying the DLA sell price (cost of procuring the item from suppliers plus markup to cover overhead expenses) plus a full markup [REDACTED] to Sikorsky to obtain material from DoD (DLA) warehouses to support CCAD requirements. In effect, AMCOM officials are paying two markups to obtain these items under this clause. Table 19 shows that Sikorsky made [REDACTED] profit in procuring items from DLA inventory in 2010.

Table 19. Sikorsky Profit on Purchases From DLA (Clause H-21)

Contract Year	Total DLA Price	Total Adjusted Contract Price	Profit	Percent
2010	[REDACTED]	\$258,009	[REDACTED]	[REDACTED]

Discussions between Sikorsky and AMCOM officials are ongoing to expand the number of items to 1,177 for 2011. If these items valued at almost \$7 million were procured from DLA, Sikorsky would receive [REDACTED] markup on the DLA prices. Another concern regarding this clause is that Sikorsky is incentivized to reduce material costs in the depot (as previously discussed in Finding B). Clearly, it does not make sense for Sikorsky to profit from DLA's lower prices. While we agree there is some cost associated with obtaining material from DoD inventory, paying Sikorsky [REDACTED] for this service is excessive. Table 20 details the Sikorsky burdens and profits (wrap rate) charged to costs under the CCAD/Sikorsky contract. While some of the Sikorsky burden costs would be applicable to items obtained from DLA, other costs would not be applicable.

Table 20. Sikorsky Wrap Rate [REDACTED] Detail

Sikorsky Wrap Rate	Amount (percent)	Applicable Cost
[REDACTED]	[REDACTED]	None
[REDACTED]	[REDACTED]	Some
[REDACTED]	[REDACTED]	None
[REDACTED]	[REDACTED]	Some
Subtotal – Burdens (including cost of money)	[REDACTED]	
Negotiated contract profit (rounded)	[REDACTED]	?
Total Markup	[REDACTED]	
¹ Slight rounding inconsistencies exist because auditor calculation includes decimal places. ² Negotiated contract profit of [REDACTED] was rounded to one decimal place for consistency purposes.		

We agree that there are some general and administrative costs that would be borne by Sikorsky in obtaining the material from DLA. However, AMCOM officials must recognize that buying inventory from DLA does not require Sikorsky to negotiate prices

with suppliers, make commitments, tie up funding, maintain inventory, and manage supplier deliveries. Therefore, profit should be minimal, if any, and the cost associated with the service provided should be far less than its full burden rate charged to meet other contract requirements.

The contracting officer needs to determine an appropriate markup and modify contract clauses related to DLA procurements to prevent Sikorsky from making excessive profits.
[Recommendation C.3]

Consolidation Goals Not Being Met

The intent of the inventory control point consolidation and the 2005 BRAC supply and storage recommendations were to make DLA the single, integrated consumable item procurement manager to leverage DoD's buying power. However, the CCAD/Sikorsky contract split requirements instead of consolidating procurement and material-sustainment responsibilities for consumable items. As a result, Sikorsky and either the Army or DLA were procuring and managing the same items. Using more than one entity to supply the same items is contradictory to the consolidation goals of the CITs of the early 1990's and the 2005 BRAC supply and storage recommendations.

Consolidation of Inventory Control Points

Historically, DLA and the Services had inventory control points for materiel management. On July 3, 1990, the Deputy Secretary of Defense approved the recommendation in Defense Management Report Decision 926, "Consolidation of Inventory Control Points," to transfer item management responsibility for approximately one million items from the Services to DLA. The report concluded that the transfer of items to DLA was both cost-effective and desirable, and would produce estimated recurring annual savings of between \$45 million to \$49 million (FY 1989 dollars) beginning in FY 1995. The intent of the transfer was to consolidate the management of items based on the premise that DLA could manage the items with fewer resources than the Services. Consolidating the Services requirements would also enable DoD to achieve economic order quantities when procuring consumable items. The consolidation was also designed to eliminate the duplicate management of consumable items within DoD.

2005 BRAC Recommendations

The supply and storage recommendations of the 2005 BRAC were largely in line with the intentions of the CIT during the early 1990s. Specifically, the 2005 BRAC recommendations directed the Services to realign or relocate management and related support functions for the procurement of depot-level repairable to DLA and to relocate item management to DLA to consolidate missions and reduce excess capacity. The realignment was designed to make DLA the single, integrated procurement manager to leverage DoD's buying power. The 2005 BRAC recommendations call for consolidating requirements of certain items to DLA by September 30, 2011. The 2005 BRAC Recommendation 176 relates to the procurement and management of aviation depot-level repairables and consumable items, realigning functions from AMCOM to DLA. Specifically, Recommendation 176, "Depot-Level Repairable Procurement Management Consolidation," states:

~~FOR OFFICIAL USE ONLY~~

Realign Redstone Arsenal, AL, as follows: relocate the Budget/Funding, Contracting, Cataloging, Requisition Processing, Customer Services, Item Management, Stock Control, Weapon System Secondary Item Support, Requirements Determination, and Integrated Materiel Management Technical Support Inventory Control Point functions for Aviation Consumable Items to Defense Supply Center Richmond, VA, and reestablish them as Defense Logistics Agency Aviation Inventory Control Point functions; [and] disestablish the procurement management and related support functions for Aviation depot-level repairables and designate them as Defense Supply Center Richmond, VA, Aviation Inventory Control Point functions.

Additional Reviews Needed to Determine the Effectiveness of Consolidation

The procurement and materiel management consolidation goals and associated savings that were addressed in the 1990s and 2005 BRAC supply and storage recommendations were not being achieved. The CCAD/Sikorsky contract was basically contracting out the DLA mission and will decrease competition and the effective use of DLA assets, increase excess capacity, and make DLA increasingly more inefficient, unless DoD develops an effective strategy to procure and manage these items. More reviews of DoD's implementation of BRAC recommendations are needed to determine their effectiveness and DLA's role in providing support to the Services.

Management Comments on the Finding and Our Response

Department of the Army Comments

The Principal Assistant Responsible for Contracting, ACC-RSA, stated that contract prices were higher than DLA prices, as reflected in the business case analysis, but were offset by the benefits gained. She stated that the achievements under the contract included a 33 percent reduction in repair turnaround time, a 70 percent reduction in back orders, and a 275 percent increase in production since 2003. Further, she stated that AMCOM procuring contract requirements from DLA inventory would have potentially cost an additional \$4.9 million.

Our Response

AMCOM needs to develop a more effective procurement and material management strategy that addresses the most cost-effective source of supply. The current strategy did not promote economic order quantities or competition between Sikorsky and DLA. Instead, the strategy fragmented requirements leading to higher prices. DoD EMALL is a valuable tool in performing a basic price analysis to determine whether DLA had the lower price and sufficient inventory to meet contract requirements or whether Sikorsky had lower prices. Using DoD EMALL, AMCOM officials can determine who can provide the material at the lowest price. Further, Table 17 (page 39) shows that had

AMCOM procured all contract requirements from DLA, the costs would have been \$9.6 million less, not \$4.9 million more. Also, the report recommends procuring those items from DLA only when cost-effective and practical to do so.

We agree that when two sources (Sikorsky and DLA) maintain inventory, it is easier to reduce back orders and increase parts availability, which positively impact production. Further, current operations in Afghanistan and Iraq have increased requirements for additional production.

Recommendations, Management Comments, and Our Response

C. We recommend that the Executive Director, Army Contracting Command – Redstone Arsenal, instruct the contracting officer to:

1. Require Sikorsky to obtain consumable items from the Defense Logistics Agency as the first source of supply when cost-effective and practical.

Department of the Army Comments

The Principal Assistant Responsible for Contracting, ACC-RSA, agreed. She stated that in 2009 Sikorsky and DLA executed a memorandum of agreement where Sikorsky would purchase material from DLA, when DLA identified sufficient stock for CCAD requirements and when cost-effective. She stated that Sikorsky has adjusted contract prices in 2010 and 2011 by \$646,000 and \$304,000, respectively, for items procured from DLA.

Our Response

Comments from the Principal Assistant Responsible for Contracting, ACC-RSA, were responsive. However, our data show price reductions for 2010 as only \$217,842. No further comments are required.

2. Request that Sikorsky provide a refund of \$930,760 for excessive profits charged on purchases from the Defense Logistics Agency.

Department of the Army Comments

The Principal Assistant Responsible for Contracting, ACC-RSA, disagreed. She stated that the fact that Sikorsky applies its [REDACTED] markup does not equate to excessive profits and that the effort and risk to the contractor must also be considered. She also stated that delays in delivery or failure to meet quality requirements when procured from DLA shall not be deemed Government-caused and, therefore, add additional risk to Sikorsky.

Our Response

Comments from the Principal Assistant Responsible for Contracting, ACC-RSA, were not responsive. The comments did not meet the intent of the recommendation and failed to address the practice of charging the negotiated contract price regardless of the costs of obtaining the item from DLA inventory. For example, Sikorsky procured six seat support

assemblies from DLA at a unit price of \$143.26 each. However, AMCOM paid Sikorsky the contract unit price of \$2,510.06, a total markup of \$14,201 or 1,652.1 percent. The excessive prices charged have no relationship to Sikorsky's [REDACTED] markup. Again, a more cost-effective, commonsense procurement strategy is needed. We request that the Principal Assistant Responsible for Contracting, ACC-RSA, provide additional comments in response to the final report, which adequately address Sikorsky charging AMCOM a contract price that is significantly higher than its cost to obtain the item from DLA and detail efforts to obtain a refund.

3. Determine an appropriate markup and modify contract clauses related to purchases from the Defense Logistics Agency to prevent Sikorsky from making excessive profits.

Department of the Army Comments

The Principal Assistant Responsible for Contracting, ACC-RSA, partially agreed. She stated that the intent of the clause is to treat all DLA-furnished material as contractor-furnished material because using DLA as a source will not relieve Sikorsky of meeting all contract metrics. She also stated that delays in delivery or failure to meet quality requirements when procured from DLA shall not be deemed Government-caused and, therefore, add additional risk to Sikorsky. She also stated that the services performed by Sikorsky to procure material from DLA are very similar to Sikorsky procuring material from its commercial suppliers and, therefore, these functions support a markup commensurate to Sikorsky's markup. Further, she stated that if Sikorsky did not fully burden the DLA costs this would result in inconsistent application of rates and cause Sikorsky to be noncompliant with their Cost Accounting Standards Disclosure Statement.

Further, she stated that if Sikorsky and DLA can negotiate an agreement where material can be fully supported by DLA, a reduced markup will be negotiated in the follow-on contract. She also stated that AMCOM will review Sikorsky's markup to ensure that Sikorsky's overall prices are not excessive when using DLA as a source of supply under the contract.

Our Response

Although the Principal Assistant Responsible for Contracting, ACC-RSA, partially agreed, her comments were responsive. No further comments are required.

Appendix A. Scope and Methodology

We conducted this performance audit from November 2009 through July 2011 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our finding and 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.

Interviews and Documentation

We met with the Commander, CCAD, and the Director, Support Operations, AMC. We interviewed and obtained information regarding CITs and 2005 BRAC transfers from officials at AMCOM. We interviewed and obtained demand and inventory information for the Blackhawk weapon system from officials of the AMCOM Integrated Materiel Management Center, Redstone Arsenal, Alabama; CCAD, Texas; the Defense Distribution Depot Corpus Christi, Texas; and DLA Distribution Depot Susquehanna, Pennsylvania. We interviewed and obtained material cost reduction and reduced turn around time information from officials at CCAD, Texas, and AMCOM, Redstone Arsenal, Alabama. We interviewed and obtained acquisition planning documentation from personnel of the AMCOM Contracting Center, Redstone Arsenal, Alabama. We reviewed the United States Code and Federal Acquisition Regulation for guidance on acquisition planning, economic order quantities, inventory, and contract incentives. We used Electronic Documentation Access System to obtain and review the current CCAD/Sikorsky contract W58RGZ-09-D-0029 and modifications issued from December 2008 through December 2010.

Nonstatistical Sample Selection

We selected a sample of 332 items based on the top 80 percent of the total contract value, which was selected from both the components and airframe material for contract W58RGZ-09-D-0029. The sample items represented \$496.1 million of the total \$619.9 million of material on the contract. We used the Haystacks Gold System to determine whether the items were managed by the Army or DLA. Of the sample items, we identified 93 Army items, valued at \$187.4 million; 184 DLA consumables, valued at \$171.3 million; and 55 CITs, valued at \$137.5 million.

Inventory Analysis

We reviewed the current CCAD/Sikorsky contract requirements and existing DoD inventory for our sample items to identify excess existing inventory that could be used to meet current and future CCAD/Sikorsky contract requirements. Additionally, we used DoD EMALL to obtain and review stock on hand, consumption data, and the DLA standard unit price for 7,093 items on the CCAD/Sikorsky contract to identify existing DLA inventory that could be used to meet contract requirements. We also reviewed data

for consumable items in our sample that were transferred to DLA in accordance with a 2005 BRAC recommendation to determine if the CCAD/Sikorsky contract requirements were also transferred.

Price Analysis

We used the DoD EMALL to compare the CCAD/Sikorsky contract price with the DLA price for 6,005 items to determine how reasonable contract prices were. In addition, for the analysis of material cost reductions, we selected 74 high-dollar components used on 6 repair programs and performed a price analysis to determine whether reduction of material costs could be attributable to lower contract prices of new material.

Material Cost Reduction Analysis

We obtained and reviewed labor hours and material cost data for 70 repair programs from officials at CCAD, Texas, and AMCOM, Redstone Arsenal, Alabama. We focused our review on the top five repair programs with the highest calculated material savings and one program that showed a total negative material cost for 2009 performance. Specifically, we reviewed detailed material cost data from SDS and LMP for these six repair programs from officials at CCAD, Texas and AMCOM, Redstone Arsenal, Alabama. We also obtained and reviewed documentation of implemented improvements for two of the six repair programs from Sikorsky. We verified the incentive payment to Sikorsky for the material cost reduction clause by reviewing the invoice in wide area work flow and the authorization for payment.

Use of Computer-Processed Data

We relied on computer-processed data from DoD, DLA, and commercial sources. We used data from the Electronic Document Access System to identify previous procurement quantities and prices of the sample items. We also obtained the procurement history for the sample items from the Haystacks Gold System, a commercial system. We used the Federal Logistics Information System to identify item descriptions, managing entity, and obtain the standard unit prices to value existing inventory. We obtained data from the DLA Office of Resource and Research Analysis to include inventory, demand, requisitions, and pricing data. In addition, we used DoD EMALL to obtain stock on hand, consumption data, and DLA standard unit prices. We determined that the computer-processed data and procurement history data were reliable based on a comparison with actual source documents. In addition, we used the Haystacks Gold System for the past several audits and have not found any material errors or discrepancies. We determined the reasonableness of inventory levels by comparing data from AMCOM Integrated Materiel Management Center, Redstone Arsenal, Alabama, and DLA. We did not find errors that would preclude the use of the computer-processed data to meet the audit objectives or that would change the conclusions reached in this report. In addition, we obtained material cost data from SDS and LMP from CCAD, Texas, and AMCOM, Redstone Arsenal, Alabama. We found significant discrepancies with the data used to determine material costs from LMP, as discussed in Finding B of this report. Our calculations, conclusions, and the overall audit results were not affected by this deficiency.

Appendix B. Prior Coverage

During the last 5 years, the GAO, the Department of Defense Inspector General (DoD IG), and the Army Audit Agency, have issued ten reports discussing topics related to the management of spare part inventories and DoD public-private partnership agreements with private firms for depot maintenance. Unrestricted GAO reports can be accessed over the Internet at <http://www.gao.gov>. Unrestricted DoD IG reports can be accessed at <http://www.dodig.mil/audit/reports>.

GAO

GAO Report No. GAO-11-139, “Additional Oversight and Reporting for the Army Logistics Modernization Program Are Needed,” November 18, 2010

GAO Report No. GAO-10-469, “Defense Logistics Agency Needs to Expand on Efforts to More Effectively Manage Spare Parts,” May 11, 2010

GAO Report No. GAO-10-461, “Actions Needed to Improve Implementation of the Army Logistics Modernization Program,” April 30, 2010

GAO Report No. GAO-09-703, “DoD Needs to Update Savings Estimates and Continue to Address Challenges in Consolidating Supply-Related Functions at Depot Maintenance Locations,” July 9, 2009

GAO Report No. GAO-08-902R, “Depot Maintenance: DoD’s Report to Congress on Its Public-Private Partnerships at Its Centers of Industrial and Technical Excellence (CITEs) Is Not Complete and Additional Information Would Be Useful,” July 1, 2008

DoD IG

DoD IG Report No. 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

DoD IG Report No. D-2011-061, “Excess Inventory and Contracting Pricing Problems Jeopardize the Army Contract With Boeing to Support the Corpus Christi Army Depot,” May 3, 2011

DoD IG Report No. D-2010-067, “Public-Private Partnerships at Air Force Maintenance Depots,” June 10, 2010

DoD IG Report No. D-2010-063, “Analysis of Air Force Secondary Power Logistics Solution Contract,” May 21, 2010

Army Audit Agency

Army Audit Agency Report No. A-2008-0058-ALM, “Benefits of Public-Private Partnerships,” February 7, 2008

Department of the Army Comments



REPLY TO
ATTENTION OF:

AMCIR

DEPARTMENT OF THE ARMY
HEADQUARTERS, U.S. ARMY MATERIEL COMMAND
4400 MARTIN ROAD
REDSTONE ARSENAL, AL 35898-5000

SEP 26 2011

MEMORANDUM FOR Department of Defense Inspector General (DoDIG), ATTN: [REDACTED]
[REDACTED] Room 300, 400 Army Navy Drive, Arlington, VA 22202-4704

SUBJECT: Revised Command Reply to DoDIG Draft Report: Changes Are Needed to the Army Contract With Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot (Project No. D2010-D000CH-0077.002) (D1010)

1. The U.S. Army Materiel Command has reviewed the subject report and endorses the enclosed comments, with revisions, provided by the U.S. Army Contracting Command and the U.S. Army Aviation and Missile Life Cycle Management Command.

2. The AMC point of contact is [REDACTED]

Encl


JOHN B. NERGER
Executive Deputy to the
Commanding General

~~FOR OFFICIAL USE ONLY~~



DEPARTMENT OF THE ARMY
UNITED STATES ARMY AVIATION AND MISSILE COMMAND
5300 MARTIN ROAD
REDSTONE ARSENAL AL 35898-5000

AMSAM-IR

SEP 13 2011

MEMORANDUM THRU [REDACTED] Acting Director, Internal Review and Audit Compliance Office, US Army Materiel Command, 4400 Martin Road, Redstone Arsenal, AL 35898

FOR [REDACTED] Department of Defense, Office of Inspector General, 400 Army Navy Drive, Arlington, VA 22202-4704

SUBJECT: DODIG Draft Report, Changes Are Needed to the Army Contract With Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot (Project No. D2010-D000CH-0077.002) (AMCM No. D1011) (AMCOM No. 2010L009D)

1. Reference Memorandum, HQAMC, undated, subject: Command Reply to DODIG Draft Changes Are Needed to the Army Contract with Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot (Project No. D2010-D00CH-0077.002) (D1010).

2. Enclosed are revised comments to the subject draft report from the US Army Aviation and Missile Life Cycle Management Command (AMCOM). The response was prepared by the Army Contracting Command – Redstone Arsenal.

3. The points of contact are [REDACTED]

Encl

CHANDLER C. SHERRILL
COL, AV
Chief of Staff



CCAM-BMP

DEPARTMENT OF THE ARMY
ARMY CONTRACTING COMMAND - REDSTONE
BUILDING 5303 MARTIN ROAD
REDSTONE ARSENAL, ALABAMA 35898-5000

SEP 07 2011

MEMORANDUM FOR Internal Review and Audit Compliance Office, U.S. Army Aviation and Missile Command (AMSAM-IR), Building 5302, Room 2147, Redstone Arsenal, Alabama 35898-5000

SUBJECT: Revised Comments for DoDIG Draft Report, Changes Are Needed to the Army Contract With Sikorsky to Use Existing DoD Inventory and Control Costs at Corpus Christi Army Depot (Project No. 2010-D000CH-0077.002)

1. The Army Contracting Command-Redstone has reviewed the subject draft report and provides the enclosed revised response. This updates the comments provided to the DoDIG by AMC on 29 Aug 2011.
2. The points of contact are [REDACTED]

Encl


MARY C. DICKENS
Principal Assistant Responsible for Contracting

~~FOR OFFICIAL USE ONLY~~

COMMAND COMMENTS
DODIG Draft Report
Changes Are Needed to the Army Contract With Sikorsky to
Use Existing DOD Inventory and Control Costs
at the Corpus Christi Army Depot
(Project No. D2010-D000CH-0077.002)
(AMC No. D1011) (AMCOM No. 2010L009D)

Revised Comments:

This submission reflects a revision of the previous comments furnished to the DoD IG office on 29 Aug 2011. This reflects changes in the data utilized for unit pricing comparison between contract, Defense Logistics Agency (DLA) and Army Master Data File (AMDF) pricing. The initial Army response included calculations of unit pricing that did not reflect adjustments for unit of issue for some items. This impacted the savings calculated as follows:

A detailed price analysis was performed on the total contract extended value, comparing the contract price to DLA and AMDF historical pricing. Based upon the detailed price analysis the overall contract price reflected a significant decrease of \$36.3M or 24% from DLA historical pricing for actual contract quantities sold to the depot for 2008 through 2010. However, when the calculation was adjusted to incorporate the unit prices reflective of the correct unit of issue, this reflected an actual increase from DLA pricing of \$13.3M (4.93%) for actual quantities sold from 2008 through Aug 2011. The unit of issue is measured as either "each" or some type of "bulk quantity designation". In the initial pricing review, extraction of historical pricing from a database, either DLA or AMDF, did not account for items which were priced in a 100 quantity unit versus each, which inflated the calculated savings previously cited. Pricing had to be converted for the unit of issue of a "hundred" down to an individual part price in order to accurately compare to the contract prices. This step was not performed in the initial analysis. Additionally, the contract pricing compared to the adjusted AMDF pricing continues to reflect a decrease of \$10.2M (3.5%) for 2008 through Aug 2011, even though it is less than the original calculation of \$53.5M.

Adjustment of the total 2008 - 2012 initial price analysis to correct the unit of issue anomalies, inclusive of actual quantities sold through Aug 2011, reflects the following in contrast to the original comments which indicated a significant price reduction from both DLA and Army Master Data File (AMDF) historical pricing 46% and 49% respectively. The adjusted value finds that the overall contract price is 2.96% higher than the AMDF pricing and \$11.77% higher than the DLA pricing over five years should all the quantities estimated for the remainder of the contract be purchased. However, this continues to validate the cost and qualitative criteria reflected in the Business Case Analysis developed to support this contract as it was anticipated that material could increase up to 25%. With the benefits gained from the partnership, the material increases are considered an acceptable tradeoff for the cost of increased production and readiness. There will always be individual items which reflect lower prices from DLA, based on large volume buys, which are not available under the contract. This was anticipated in the

original acquisition strategy; however, the value of increased production and reduced repair turnaround time was determined to be an acceptable trade off for this potential material increase.

The performance goals all improved as predicted. We stabilized and maintained readiness while simultaneously upgrading capability and extending the usable life of the equipment. See achievements below:

- Reduced repair turnaround time (RTAT) achieved - 33% reduction
- Reduction in backorders (70%) equating to an increase in readiness
- 13,688 total components produced (275% increase since 2003)

In the Approved Business Case each of these outcomes were predicted.

Based upon this information comments are revised for Sections B.1, C.2 and C.3.

General Comments:

Reference IG comments in cover letter in which they indicate that DLA had sufficient inventory to satisfy contract requirements for 3,267 parts where the contract price was \$7.6M higher than the DLA price. However, the DODIG also identified 1,990 parts in which the contract price was \$12.5M less than the DLA price. This fact indicates that for the items where DLA had inventory in the 2010 timeframe, procuring from the DLA would have potentially cost an extra \$4.9M. (See Comment to Recommendation C.2.)

Finding A. Excess DoD Inventory:

“AMCOM officials did not effectively use \$205.9 million of DoD inventory before procuring the same parts directly from Sikorsky under the CCAD/Sikorsky contract to support the Blackhawk weapon systems. DoD inventory was not effectively used for the following reasons:

- AMCOM officials did not develop procedures to fully use existing DoD inventory before procuring the same items from Sikorsky. The Army, DLA, and Sikorsky all used different systems to manage inventory and requirements and no system provides total asset visibility or requirements information. AMCOM officials have a responsibility to match and reduce CCAD/Sikorsky contract requirements when existing DoD inventory is available.
- AMCOM officials transferred inventory to DLA Aviation as part of a 2005 Base Realignment and Closure (BRAC) supply and storage recommendation, but did not transfer requirements for the items that are now being met by Sikorsky on the CCAD/Sikorsky contract.

As a result, we identified \$47.5 million (87 items) to \$58.7 million (113 items) of excess DoD inventory that could be used to satisfy CCAD/Sikorsky contract requirements for The Blackhawk helicopter (\$28.8 million to \$34.5 million over the next 2 contract years with an additional \$18.7 million to \$24.2 million that could be used to satisfy future

contract requirements). Using the DoD EMALL, we identified an additional \$46.8 million (valued at the DLA standard unit price), or \$230.7 million (valued at the contract price) of DLA inventory, for 1,676 items that AMCOM could have used to meet CCAD requirements rather than procuring these items from Sikorsky.”

Recommendation A.1: “We recommend that the Commander, Army Aviation and Missile Life Cycle Command, and Director, Defense Logistics Agency Aviation, establish a team with representatives from Corpus Christi Army Depot and Sikorsky to develop an acceptable plan to use existing inventory to meet current and future Corpus Christi Army Depot requirements. Additionally, an annual provisioning conference should be held to revisit the excess inventory situation until it is resolved.”

Command Comments: Partially Concur. The IG identified \$47.5M to \$58.7M of potential excess DoD inventory that could be used to satisfy CCAD/Sikorsky contract requirements at CCAD. A detailed review of inventory available to support this platform at Corpus Christi Army Depot (CCAD) was performed by AMCOM Integrated Materiel Management Center. This resulted in a total estimated value of AMCOM stock that is considered excess for these programs to support CCAD of \$24.7M versus the IG’s estimate above. Specifics are depicted below:

AMCOM and CCAD are identifying excess Government Furnished Material to be provided under the contract to ensure that DoD inventory is used effectively. AMCOM officials have looked at all excess inventory and all quantities that can be used currently have been reflected in adjustments to the contract. This reflects the total AMCOM excess amount of \$24.7M to date. This is a continuous process and will be executed throughout the remainder of the contract. Currently, a Memorandum of Agreement (MOA) is in process of execution with all stakeholders, AMCOM/DLA/CCAD and Sikorsky. This process will evaluate the potential use of excess material. This MOA will ensure that government inventory will be utilized as a first priority and the contract will be modified to reflect usage of any applicable Government Furnished Material. Based on the fact that inventory management is at the government’s discretion, the contractor will be directed to utilize government inventory. It is recognized that some negotiation of this issue may occur based on the contractor’s lay-in of materials for current contract requirements; however, excess DoD inventory will be appropriately managed under this contract concept. The drawdown of excess DLA inventory will be accomplished under this contract in accordance with guidance issued by GEN Dunwoody, AMC Commander, “Order of Preference for Utilizing Repair Parts Policy Memo, as well as the Principal Deputy Under Secretary of Defense for Logistics and Material Readiness memorandum, entitled “Maximum Utilization of Government-Owned Inventory in Performance-Based Logistics Arrangements,” dated December 20, 2010. Additionally, the contract requires Sikorsky to utilize DLA as the preferred supplier for DLA managed items that are determined to be the best value to the Government in terms of price, delivery and quality. As in the past, AMCOM has and will continue to utilize/draw down “Excess” inventories in a managed process prior to procuring additional material under the Partnership contract as appropriate.

In Aug of 2008 the Aviation and Missile Command transferred items to Defense Logistics Agency (DLA) in accordance with the Base Realignment and Closure Act of 2005. Items were transferred in accordance with the standard process using the U.S. Army wholesale logistics

programs. More specifically, the Commodity Command Standard System was used by the Army for this process. Transactions were generated which moved logistics data, to include requirements, to the DLA. Prior to the transfer date, the AMCOM Inventory Managers provided DLA paper copies of all available supply actions that occurred on the applicable items over the last five years. In addition to that, the Blackhawk office provided printouts of demand data so that the DLA Inventory Managers could load these into their system in the event that this data did not post to their database. The demands for items to support the depot were appropriately turned off in accordance with the DoD Manual 4140.26-M, Volume 2, which states that consumable items that are unique to a weapon system, when the items have been included in a performance-based life-cycle product support (PBL), can be retained by the Military Departments' contractor or agent. Therefore, these depot items should not be inventory purchased by DLA.

In the specific instance cited in the report relative to DLA inventory available to meet contract requirements for a retainer, NSN 3110-01-243-6588, this will be obtained from DLA inventory for the remainder of the contract period. Depot demands for these items are very small as only 24 total have been purchased since 2008 for a total value of \$74,408, compared to the total DLA price of \$16,503. The projected demand per year is 12 for the remainder of the contract period; however, for 2011 a quantity of only 5 has been purchased to date.

Additionally, in reference to the IG's Table 5. Low-Dollar Parts Affect Calculation of DLA Inventory Value at Contract Price on page 10 of the report, the statement that 2010 annual contract requirements for the parts listed range from 2 to 628 which are not representative of the DLA on-hand inventories is accurate. Also, the IG calculation appears to indicate that the Army would pay \$80,890,804 in excess of DLA prices for these parts. To clarify, the contract quantities purchased through Aug 2011 for these items are very small (as stated by the IG table) and calculation of the contract prices based on actual contract quantities yields a much smaller extended value for the contract of \$22,990. The DLA pricing for this quantity reflects a total extended value of \$4,562. In summary, the \$81M calculation is not a correct indicator of what we would pay for these items based on the depot demand and contract price. It is noted that coordination with DLA indicates that their current stock on hand is not considered "excess" by DLA even though they have extensive amounts of stock available, as they have a steady burn down rate for multiple customers with a steady average monthly demand applied to each item.

Recommendation A.2: "We recommend that the Commander, Army Aviation and Missile Life Cycle Management Command:

a. "Determine whether Sikorsky should manage the reduction of existing DoD inventory in meeting Corpus Christi Army Depot requirements. If so, assign responsibility and make Sikorsky accountable through contract terms and metrics"

Command Comments: Partially-concur. Through the inventory reduction team concept described in recommendation A. 1, the applicable excess inventory will be reduced effectively. Sikorsky will be an obvious stakeholder in this effort; however, they will not be the manager. Sikorsky will be required to meet existing contract metrics while working within the government framework developed to draw down existing excess inventory.

b. "Require that the Army Aviation and Missile Life Cycle Management Command, Integrated Materiel Management Center, not transfer items to Defense

Logistics Agency when future requirements for those items will be supported by commercial sources."

Command Comments: Partially-concur. A response to a similar audit report (DoD IG Report No. D-2011-061, issued 3 May 2011) was provided by the Office of the Assistant Secretary of Defense, Principal Deputy, Logistics and Materiel Readiness, Mr. Alan Estevez, regarding this issue. This response addresses this issue as follows: The transfer of items is governed by DOD policy reflected in DOD Manual 4140.26-M, Volume 2, "The DoD Integrated Materiel Management (IMM) for Consumable Items: Item Management Coding (IMC) Criteria" that addresses the transfer of consumable items. Consumable items that are unique to a weapon system, when the items have been included in a performance-based life-cycle product support (PBL), can be retained by the Military Departments' contractor or agent. Consumable items not unique to a weapon system (common items) will be assigned to DLA or General Services Administration for management.

Finding B. No Justification for Material Cost Reduction Clause Payment:

"AMCOM officials, as directed by AMC officials, added a material cost reduction clause into the CCAD/Sikorsky contract, which was not effective in reducing CCAD repair costs. The clause was designed for Sikorsky and CCAD to share savings associated with reduced material usage for repair programs. However, the clause was not effective because AMCOM officials:

- used unreliable data to calculate that material costs were reduced by \$23.7 million from baseline to performance costs;
- failed to consider depot labor (hours) costs in its cost reduction methodology; and
- omitted repair programs that experienced material cost increases, as required by the clause, from its incentive calculation.

As a result, on January 25, 2011, AMCOM officials made an unjustified payment of \$11.8 million for the 2009 performance period (half of the \$23.7 million material cost reduction calculation) based on performance data that included incomplete transactions; negative transactions, which showed material costs to repair items at less than zero; and lower material prices procured from sources outside the CCAD/Sikorsky contract. The incentive calculation also failed to include repair programs with increased depot labor costs of \$26.1 million and repair programs with material cost increases of \$15.1 million. We calculated that overall depot costs increased by \$29.3 million for the 70 repair programs covered under the contract."

Recommendation B: "We recommend that the Executive Director, Army Contracting Command – Redstone Arsenal, instruct the contracting officer to:

1. Obtain a refund of \$11.8 million from Sikorsky for the material cost reduction incentive.”

Command Comments: Partially Concur. The focus of the material cost reduction clause was to reduce material "cost" to the depot. During negotiation of the clause, the intention was to include an incentive for material decreases and disincentive for material increases. It was anticipated that Sikorsky would focus on decreases for all material with a contract incentive. Additionally, the government determined that it would be advantageous to recalculate the Baseline each subsequent contract year based on the prior year Baseline Unit Material Cost or the prior year Actual Material Costs, whichever was lower. This baseline adjustment was designed to take advantage of the previously achieved material cost reductions in order to ensure that there was no redundancy calculated in the incentive baseline. Initially Sikorsky would not agree to the year-to-year baseline adjustment. After months of negotiation, the government concession to Sikorsky for utilizing the year-to-year baseline adjustment was not including a disincentive for material cost increases. It should be noted that there was benefit to the government gained from the yearly baseline adjustment of the material costs. A total of 8 programs reflected reductions of \$1.2M in 2010. We agree with the IG's observation that some programs reflected increases in material costs. Some of the potential reasons for increase are significant environmental effects causing extreme degradation of parts or increase in OPTEMPO to support the field. We are currently investigating these items to determine the reasons for these increases. If we find areas that Sikorsky should or could have influenced for reductions, we will take appropriate action. Under the current terms of the contract, which include the baseline adjustment each year and no consideration for program increases (as stated in the clause), the contractor has earned an incentive of \$11.8M based on a review of all the current data. We do not concur with the IG's conclusion that his calculation for increase in depot labor costs of \$29.3 million relative to the 70 repair programs should be related to this contract. There is no data that corresponds to this contract causing an increase in depot standard labor hours. There is no evidence that increased labor hour costs compared to standard labor hours result from this partnership contract.

An improvement initiative implemented at the depot within the last six months has been to develop fully trained contracting officer representatives to monitor this contract. These CORs have outstanding skill in understanding the depot requirements as well as the contract. This will provide a more detailed level of oversight for the contract going forward in order to improve the processes for the remainder of the contract.

Specific details relative to the negotiation and results of the material cost reduction clause are as follows:

The baseline established for review of the results of material cost reduction was inclusive of all material consumed during the maintenance process, whether that material was provided by Sikorsky or was obtained from another source. During the establishment of the clause the thought was that to limit the baseline to only Sikorsky provided material would have led to an unfair advantage to Sikorsky. This assumption was based on the volume of material required to support CCAD production which is provided by other sources. Some of the reasons for this are as follows: 1) some items were not included in the Sikorsky contract for various reasons and had

to be procured from other sources, 2) Sikorsky could not provide the required part on time and another source had the stock available, 3) some parts were already available in the USG's stocks and were consumed prior to obtaining them from Sikorsky. Therefore, the baseline was developed to include all materials purchased during the fiscal year 08 in order to reflect the true cost of material to the depot for UH-60 during that timeframe.

The DODIG finding notes that material cost increases were not included in the incentive calculation. The DODIG concludes that Sikorsky had no disincentive for failing to control material costs throughout the depot and could pick and choose which programs to control costs. The clause did create an incentive for Sikorsky to control all costs. The 50% incentive is applied equally to all component and airframe repair programs. A dollar earned in one program is equal to a dollar earned in another; therefore, the contractor was incentivized to reduce costs across all programs. Any prudent contractor would try to control costs across the board to maximize the potential for earning incentives.

It should be noted that throughout the negotiation period of the Material Cost Reduction (MCR) clause, most versions based the calculation of the incentive on "50% of the Net Material Cost Reduction from the Baseline". This included both increases and decreases in material costs. The government determined that it would be advantageous to recalculate the Baseline each subsequent contract year based on the prior year Baseline Unit Material Cost adjusted at the contracted inflation factor of 4% or the prior year Actual Material Costs adjusted at the contracted inflation factor of 4%, whichever was lower. This rebaselining process was designed to take advantage of the previously achieved material cost reductions in order to ensure that there was no redundancy calculated in the incentive baseline.

The option to measure each year's actual cost against predetermined baselines to be established in the contract with no year-to-year adjustments was discussed at length; however, after exploring various methodologies, Sikorsky accepted the government's preference to recalculate/adjust the baseline each year. The consideration to Sikorsky in the agreement was that for programs where actual costs exceeded baseline costs, these would not be included in each year's incentive calculation. Evidence that adjusting the baseline each year has proven beneficial to the government position is reflected in a review of 26 programs completed in 2010, which revised the baseline. A total of eight programs reflected significant reductions in the baseline, ranging from 34 to 78 percent for a total of \$1.2M. Therefore, any potential incentive would be reduced based upon this adjustment to the baseline. This indicates that the material cost is being reduced on many programs.

The IG's conclude that any material cost reduction measurement must be tied to the established Depot Overhaul Factor's (DOF). This is defined as a factor representing the quantity of a specific stock number needed to overhaul one end item. DOFs are established based on an estimated three year rolling average, and in a dynamic maintenance environment are subject to change based on various factors. The types of on condition maintenance (OCM) required at the depot do not support exact adherence to a DOF; trends relative to degrees of OCM required tend to ebb and flow with both increases and decreases. Based upon this dynamic, even though estimates of required material may be initially based upon the DOF's for specific components, the actual consumption of material may vary based upon the actual OCM performed. The MCR anticipated that Sikorsky could support the DOF revision process based on identifying

improvements to repair processes which in turn could serve to reduce DOF's. The overall concept is that with reduced DOF's there should be a corresponding reduction in material required for OCM.

A review of the DOF changes for the items reflected in the MCR evaluation reflects decreases in DOF's for higher value items outweighed increases from 2009 - 2010. A significant portion of the DOF changes can be contributed to some of process improvements Sikorsky brought to the depot under the contract. Some examples are 1) qualifying CCAD for shotpeening processes which supported a critical safety item, shaft assembly; 2) incorporating a material protection process which prevented handling damage and reduced scrap for numerous items; and 3) reclaimed 48 pinions through Storage Analysis Failure Evaluation and Reclamation (SAFR). An analysis of the DOF changes from 2009 - 2010 reflects an overall reduction in total demand quantity value due to DOF changes in 2010. This represents a total savings of \$21.8M.

Calculation of the incentive was derived through due diligence of dedicated depot professionals. Each program was manually reviewed very carefully to ensure that all available data was considered in the evaluation of the incentive. This included manual processes and reviews to ensure that legacy system and Logistics Modernization Program (LMP) data were included in the process.

With the implementation of LMP at CCAD, a large volume of material was identified in the system, which had previously been charged (through the financial system) to depot programs. A decision was made that this material would be categorized as "no value" within the current system, in order to preclude double charging to programs. Even though the LMP system did not include this material as a cost, the depot evaluation team included this (with a value) in the material cost reduction calculation. As a result, calculation of the material cost reduction accurately reflected adjustments for this material.

For some programs, the IG's questioned the validity of LMP data, i.e., it did not relate to the DOF quantity and showed a negative quantity used in the calculation of the incentive. There are scenarios that could have led to negative quantities reflected in the calculations. For example, when component parts were "turned in" as part of closing a program, this could have caused the overall negative transactions. There could be several factors that contributed to the negative material cost. As this was a Legacy program that migrated into LMP, negative cost can be associated with inventory adjustments at completion of the program, material on the program that was transferred into an unrestricted stock category. With implementation of LMP, stock issues were highlighted, in that stocks on hand, which had not been visible in the previous system, were identified. Some of these stocks were likely measured within the LMP model and with the issue of turn-ins, some of the total programs reflected negative numbers. In that the clause measured all material, this was part of the measurement.

The IG indicates that the clause should provide for equal consideration of labor increases. Depot labor costs are developed based upon depot program managers evaluating historical performance compared to current Repair Bill of Material (RBOM) estimates. He uses his business judgment to develop a discrete number to "bid" for that particular repair/overhaul. It is an "estimate" of what the depot perceives it will cost. At completion of the program, the actual costs are

accumulated and tracked for each program in order to determine the real cost to the depot for both material and labor. The overall performance goals all improved as predicted. We stabilized and maintained readiness while simultaneously upgrading capability and extending the usable life of the equipment. See achievements below:

- Reduced repair turn around time (RTAT) achieved - 33% reduction
- Reduction in backorders (70%) equating to an increase in readiness
- 13,688 total components produced (275% increase since 2003)

In the Approved Business Case each of these outcomes were predicted.

We do not find any data that directly relates depot labor hour increases to this contract. The IG's conclusion that depot labor increases should be considered in calculation of this clause is not realistic or applicable to this calculation. There are numerous potential reasons for labor increases. Some of the reasons are as follows:

1) Assets in worse condition than expected, requiring additional overhaul/repair processes, 2) higher than anticipated scrap rates, 3) part not available for non-standard repair (parts were not initially projected in planning for the repairs), 4) repair versus replace, 5) internal quality issues, 6) test stand issues, 7) equipment failures.

Repair versus replace decisions result from Sikorsky identifying repairs which were not previously documented under depot technical documents. This can result in decreases in total material consumption, even if there are some increases in labor hours. The government must assess repair/replace decisions prior to implementation with the knowledge there is a potential impact to increase depot labor. Evaluations are always on-going to determine the most efficient means of meeting production at the depot and in some instances, and conversely items which previously were identified as repair (due to extreme wear over the course of time) have been identified as most cost effective to replace.

The contractor does not have the ability to substantially influence the depot labor required for maintenance. The depot provides the artisan workforce with no supplemental support from the contractor. Even if labor increases with repair versus replace activities, the numerous other potential impactors to labor which result from issues outside of the contractor's control and therefore cannot be used as a valid measure to evaluate the contractor's value in reducing depot costs. Based upon these issues, depot labor costs cannot be utilized to measure this incentive/disincentive under the contract.

2. "Immediately remove the material cost reduction clause from the contract unless reliable data are used, which relate to depot overhaul factors, remove lower material prices procured from sources outside the contract, and provide for equal consideration of labor and material cost increases."

Command Comments: Partially Concur. A suspension of the material cost reduction incentive will be negotiated for the remaining FY 2011 and 2012 programs pending the results of the investigation into the issue of increases in material costs for some programs. One of the major factors which must be considered in this contract concept is the dynamic changes that

occur to impact the Depot's workload. These are a result of many factors, some of which are Depot Overhaul Factor changes or major program changes. These changes result regularly in fluctuations of quantities of parts required. If the contract is not flexible enough to allow for these quantity changes, recognizing that this may not lead to lowest price solution by the partner, it negates our ability to meet mission performance, impacting readiness and soldier support. With this knowledge, the material cost reduction clause was incorporated to help control the material costs under the contract. However, we agree with the IG's observation that some programs reflected increases in material costs. We also agree that there was no contract disincentive, which is the preferred method in performance based clauses. If we find areas that Sikorsky should or could have influenced for reductions, we will request an appropriate refund. However, as previously stated, the government did reap some benefits by means of recalculating the baseline year to year.

Based upon the extensive processes employed by CCAD personnel in order to establish the material baseline and evaluate performance on 70 programs, the results of the government evaluation are viewed to be accurate based upon the available data.

Finding C. Splitting Requirements for Consumable Items Was Not Cost-Effective:

"The CCAD/Sikorsky contract was splitting instead of consolidating procurement and material sustainment responsibilities for consumable items purchased on the contract. Consequently, Sikorsky and either the Army or DLA were procuring and managing the same items, and Sikorsky was procuring items from DLA and charging AMCOM higher prices. Specifically, Sikorsky had responsibility for procuring and managing items used at CCAD while either the Army or DLA had responsibility for procuring and managing the same items to meet requirements outside of CCAD. This occurred because AMCOM officials had not:

- developed an effective procurement and material management strategy that addressed the most cost-effective source of supply for consumable items, and
- addressed an appropriate markup for Sikorsky on items procured from DLA.

Using the DoD EMALL, we identified that DLA had sufficient inventory to satisfy annual CCAD/Sikorsky contract requirements for 3,267 items and that the total contract price for these items was \$7.6 million, or 85.1 percent, higher than the total DLA price.¹⁵ Although AMCOM officials were able to reduce contract prices for 29 items by \$217,842 by procuring 2010 requirements from DLA inventory, we question the decision to pay a full markup [REDACTED] to Sikorsky on these items. Further, from 2008 to 2010, Sikorsky made a 58.7 percent profit, or \$930,760, on 449 items purchased from DLA, which were sold to CCAD at the contract price."

Recommendations C: "We recommend that the Executive Director, Army Contracting Command - Redstone Arsenal, instruct the contracting officer to:

1. Require Sikorsky to obtain consumable items from the Defense Logistics Agency as the first source of supply when cost-effective and practical.”

Command Comments: Concur. Sikorsky executed a Memorandum of Agreement with Defense Logistics Agency in 2009 to facilitate the purchase of DLA material when cost effective and practical. This process has resulted in Sikorsky purchasing items which DLA identified as having sufficient stock to cover the CCAD requirement for the items which were cost effective and provided best value to the government. Sikorsky adjusted the contract price for these which reflected an overall reduction in contract in 2010 of \$646,000 and in 2011 a reduction of \$304,000.

The drawdown of excess DLA inventory will be accomplished under this contract in accordance with guidance issued by GEN Dunwoody, AMC Commander, “Order of Preference for Utilizing Repair Parts Policy Memo, as well as the Principal Deputy Under Secretary of Defense for Logistics and Material Readiness memorandum, entitled “Maximum Utilization of Government-Owned Inventory in Performance-Based Logistics Arrangements,” dated December 20, 2010. However, as DLA policy does not currently support “fencing” parts in order to ensure availability at point of need, Sikorsky could potentially be at risk in their contractual responsibility to meet parts demands for the depot schedule should DLA not have required parts available.

2. “Request that Sikorsky provide a refund of \$930,760 for excessive profits charged on purchases from the Defense Logistics Agency.”

Command Comments: Non-concur. The DoD IG identified some specific items which reflected DLA inventory with lower prices than those established in the contract. Specifically, DODIG found that DLA had sufficient inventory to satisfy contract requirements for 3,267 parts where the contract price was \$7.6M higher than the DLA price. The DODIG also identified 1,990 parts in which the contract price was \$12.5M less than the DLA price. This fact indicates that for the items where DLA had inventory in the 2010 timeframe, procuring from the DLA would have potentially cost an extra \$4.9M.

The fact that inventory is identified in DLA stores, does not mean that the inventory is “excess” and available for purchase. When other demands for DLA inventory exist, AMCOM does not consider the inventory “excess”, i.e., all demands must be included in the excess analysis and as indicated in the IG comments, in many instances DLA did not have sufficient inventory to meet the contract requirements. Demands for CCAD were appropriately removed from this contract; therefore, only an agreement between Sikorsky and DLA would support DLA providing parts to meet those demands.

As stated in C.1. above, Sikorsky has worked within the contract to develop agreements to purchase from DLA and has adjusted the contract price when DLA prices are lower than contract. These items are identified and adjusted on an annual basis. However, unless Sikorsky purchases the entire DLA inventory at the beginning of the period, DLA will not guarantee inventory availability for any of the parts. Also, DLA pricing is subject to change without notice and is only valid for the period of time when an order is placed. Additionally, this reflects a cost

of holding inventory for Sikorsky. Since DLA inventory changes frequently, there would be no way to determine with any degree of accuracy the required quantities of contractor furnished material, particularly in the subsequent program years. Without firm or estimated quantity information, it is not reasonable to expect a contractor to negotiate prices with its suppliers that will provide best value to the Government and also ensure that the contractor will have his supply chain in place to meet the depot requirements when needed.

The fact that Sikorsky applies their [REDACTED] markup does not equate to "excessive" profits. An overall view of the contract and the effort and risk to the contractor must also be considered. The contract clause states that "Sikorsky is solely responsible for dealing directly with DLA to insure quality and timely delivery of the parts ordered." Sikorsky's supply chain is qualified by Sikorsky to ensure all quality requirements are met. The items available from DLA often are not supplied by these qualified vendors and Sikorsky does not have a means to validate the quality for these parts. Should a quality issue arise with these parts, Sikorsky is solely responsible for resolution/restitution as required. Additionally, should the depot not have a firm requirement for the DLA purchased parts, Sikorsky cannot sell to other customers or utilize these in the production line, as they are not guaranteed to be procured from a Sikorsky qualified vendor. Additionally, the contract clause does not relieve Sikorsky from meeting all contract metrics, when using DLA as a source. Delays in delivery or failure to meet quality requirement shall not be deemed Government caused and shall not relieve Sikorsky of meeting all contractual requirement. This adds additional risk to Sikorsky when utilizing DLA as a source should DLA not have adequate inventory to meet the contract requirements. Sikorsky is required to maintain a supply chain with the ability to support the depot requirements. Reliance upon sources of supply that cannot commit to inventory availability beyond what is currently available puts the contractor at high risk for not meeting contract delivery requirements. Many of the contract items are subject to long lead times. In some cases, parts have lead times that exceed two years. In the event that expected DLA inventory becomes unavailable to meet production demand, production stoppages could extend for lengthy periods while the long lead items are being procured. The partnership has shown that relying primarily on the contractor's material supply base has improved material availability over the life of the partnership program and enabled CCAD to dramatically increase its production. There will always be individual items which reflect lower prices from DLA, based on large volume buys, which are not available under the contract. This was anticipated in the original acquisition strategy; however, the value of increased production and reduced repair turnaround time was determined to be the trade off for this potential material increase.

3. "Determine an appropriate markup and modify contract clauses related to purchases from the Defense Logistics Agency to prevent Sikorsky from making excessive profits."

Command Comments: Partially Concur. A backward look indicates that there was no guarantee that Sikorsky could obtain DLA items without utilizing the full contingent of their business management process in that they were required to review DLA parts availability, compare delivery schedules with their supply chain and determine the best value on a part by part basis. This also required executing and managing the procurement, packaging, receiving/inspecting the items, creating stocking locations, warehousing and maintaining

inventory. This effort expended is associated with burden and profit rates. These functions support a mark-up commensurate with all their other vendors.

The contract clause states that "Parts and supplies acquired from DLA are considered contractor acquired property rather than Government furnished property. Using DLA as a source will not relieve Sikorsky of meeting all contract metrics. Sikorsky is solely responsible for dealing directly with DLA to insure quality and timely delivery of the parts ordered. Delays in delivery or failure to meet quality requirement shall not be deemed Government caused and shall not relieve Sikorsky of meeting all contractual requirements." The intent of the clause is to treat all DLA furnished material as contractor furnished. No relief is granted to the contractor for quality and delivery issues as a result of using DLA as a source of supply.

Although buying material from DLA does not require Sikorsky to negotiate prices with suppliers, the DLA price is subject to change without notice, based upon the availability in their system. This change can occur anytime after the contract unit prices are adjusted based on DLA pricing. Once the contract prices are adjusted, the contractor is committed to using DLA or risk additional financial exposure. In order to meet delivery schedules, inventory of DLA furnished items must be maintained by purchasing items ahead of need (tying-up funding) in the same manner as other commercial sources. Sikorsky manages DLA deliveries the same way as commercial source deliveries. Sikorsky performs various functions when procuring DLA inventory. Sikorsky must determine demand requirements, review DLA availability, execute the procurement process through DoD EMALL, perform packaging, receive/inspect, create stocking location, warehouse and maintain appropriate inventory. Therefore, the services performed to procure from the DLA are very similar if not the same as procuring material from their commercial supply chain.

Additionally, in accordance with Sikorsky's Cost Accounting Standards Disclosure statement, [REDACTED] The DoD IG states that Sikorsky should not fully burden the DLA cost; however, this would result in an inconsistent application of these rates and cause Sikorsky to be noncompliant with their Disclosure statement. The Sikorsky accounting process treats DLA as any other supplier which reflects application of their disclosed rates and factors.

Based on the foregoing, application of a Sikorsky negotiated supplier burden to the DLA pricing is consistent with Sikorsky's Cost Accounting Disclosure Statement an overall price analysis reflects that the total contract price is fair and reasonable in comparison to overall DLA pricing.

In the follow-on contract, if DLA and Sikorsky can negotiate an agreement that specific material can be fully supported by DLA, a reduced markup will be negotiated. However, we will have to work with DCAA to ensure there are no violations of Sikorsky's Cost Accounting Disclosure Statement. If DLA support can only be provided on an ad hoc basis and DLA cannot guarantee delivery in order to meet Sikorsky's need, then Sikorsky will be required to perform all the functions that are currently required for their vendors. They must research availability, execute the procurement, package, receive, inspect the items, create stocking locations, and warehouse and maintain inventory. These functions support a mark-up commensurate with all their other

vendors. This issue will continue to be reviewed during the course of the contract in order to ensure that Sikorsky overall prices are not excessive when utilizing DLA as a source of supply under the contract.

Defense Logistics Agency Comments



DEFENSE LOGISTICS AGENCY
HEADQUARTERS
8725 JOHN J. KINGMAN ROAD
FORT BELVOIR, VIRGINIA 22060-6221

AUG 29 2011

IN REPLY
REFER TO

MEMORANDUM FOR DEPARTMENT OF DEFENSE INSPECTOR GENERAL (DODIG)

SUBJECT: DoDIG Draft Report, "Changes are needed to the Army Contract with Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot, (Project No. D2010-D000CH-077.002)

DLA's response to recommendation A1 is that a DLA Aviation and AMCOM data team was established in FY11 to monitor the drawdown of applicable DLA inventory. DLA will continue to inform AMCOM on the availability of inventory, but it is ultimately AMCOM's responsibility to determine if they will buy this inventory from DLA to meet their requirements. Point of contact for this action is [REDACTED]

For external audit related questions, please contact [REDACTED]

JEFFERY R. CURTIS
Executive Director
Material Policy, Process, & Assessment

Attachment
(DLA Aviation Response)

Federal Recycling Program



Printed on Recycled Paper

~~FOR OFFICIAL USE ONLY~~



DEFENSE LOGISTICS AGENCY
AVIATION
8000 JEFFERSON DAVIS HIGHWAY
RICHMOND, VIRGINIA 23297-5002

16 AUG 11

MEMORANDUM FOR DIRECTOR, DEFENSE LOGISTICS AGENCY, ATTN: J72

SUBJECT: DoDIG Draft Report, "Changes are Needed to the Army Contract with Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot, (Project No. D2010-D000CH-0077.002)

Subject report has been reviewed and comments to recommendation A.1. and the internal control weakness discussed in the report have been completed and are attached. Should you have any questions the point of contact is [REDACTED]

SCOTT W. JANSSON
Brigadier General, USAF
Commander

Attachment:
As stated

~~FOR OFFICIAL USE ONLY~~

DRAFT REPORT

Changes are Needed to the Army Contract with Sikorsky to Use Existing DoD Inventory and Control Costs at the Corpus Christi Army Depot

Project No. D2010-D000CH-0077.002

Dated: July 14, 2011

DoDIG Recommendations

Recommendation A.1: “We recommend the Commander, Army Aviation and Missile Life Cycle Command, and Commander, Defense Logistics Agency Aviation, establish a team with representatives from Corpus Christi Army Depot and Sikorsky to develop an acceptable plan to use existing inventory to meet current and future Corpus Christi Army Depot requirements. Additionally, an annual provisioning conference should be held to revisit the excess inventory situation until it is resolved.”

DLA Aviation Response: Agree – DLA is willing to work with AMCOM personnel pertaining to the drawing down of DoD material as discussed within this report. A DLA Aviation & AMCOM data team has been assembled to meet on a recurring or “as needed” basis. This team began meeting in FY 11 to monitor the drawdown process indefinitely or until the drawdown is eventually completed. DLA Aviation understands their responsibility to be monitoring the drawdown and facilitate communication between AMCOM, CCAD, Sikorsky, and DLA regarding material availability and quantities. DLA Aviation will inform AMCOM of available material, but it is AMCOM’s responsibility to determine what they will buy from DLA and when.

Requested Comment on Internal Control Weakness: Please provide comment(s) on any internal control procedures established to fully use existing DoD inventory before procuring the same items from commercial sources. For specific results of this weakness, see page 4 of this report.

DLA Aviation Response: DLA Aviation will utilize a manual process to track excess material drawdown until Army/DLA can develop an IT solution that allows Logistics Modernization Program (LMP) and Enterprise Business System (EBS) to share information as identified in the DoDIG report (pg 11-12). This manual process will require manpower and data analysis solutions to ensure material availability and track drawdown progress.

~~FOR OFFICIAL USE ONLY~~



Inspector General
Department of Defense

~~FOR OFFICIAL USE ONLY~~