
July 23, 2004



Acquisition

Contracting for and Performance of
the C-130J Aircraft
(D-2004-102)

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Acronyms

AFOTEC
QOT&E

Air Force Operational Test and Evaluation Command
Qualification Operational Test and Evaluation



INSPECTOR GENERAL
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July 23, 2004

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

SUBJECT: Report on Contracting for and Performance of the C-130J Aircraft
(Report No. D-2004-102)

We are providing this report for review and comment. We considered management comments on a draft of this report in preparing the final report. We performed this audit in response to allegations to the Defense Hotline concerning the Defense Contract Management Agency's oversight of Lockheed Martin's performance on the C-130, F-22, and C-5 aircraft.

DoD Directive 7650.3 requires that all recommendations be resolved promptly. Based on comments from the Assistant Secretary of the Air Force for Acquisition, we revised Recommendation 2. to address future modifications to the C-130J contracts. We request that management provide additional comments on Recommendations 1., 2., 3., and 4. Additional comments should be received by August 23, 2004.

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

We appreciate the courtesies extended to the staff. Questions should be directed to Mr. Bruce A. Burton at (703) 604-9071 (DSN 664-9071) or Mr. Rudolf Noordhuizen at (703) 604-8959 (DSN 664-8959). See Appendix D for report distribution. The team members are listed inside the back cover.

By Direction of the Deputy Inspector General for Auditing:

A handwritten signature in black ink, appearing to read "Mary L. Ugone".

Mary L. Ugone
Assistant Inspector General
for Acquisition Management

Office of the Inspector General of the Department of Defense

Report No. D-2004-102

July 23, 2004

Project No. (D2003AB-0084)

Contracting for and Performance of the C-130J Aircraft

Executive Summary

Who Should Read This Report and Why? Civilian and military managers involved in managing acquisition programs should read this report to obtain information about commercial item acquisition, requirements evolution, and test and evaluation planning because the report discusses an unjustified decision to use a commercial item acquisition strategy and other problems that occurred because of poor management.

Background. We performed this audit in response to allegations to the Defense Hotline concerning the Defense Contract Management Agency's oversight of Lockheed Martin's performance on the C-130, F-22, and C-5 aircraft. This is the third in a series of three reports concerning the allegations. This report addresses the allegation that the C-130J aircraft does not meet contract specifications and therefore cannot perform its operational mission.

The primary mission of the C-130J remains unchanged from the existing C-130 fleet. The C-130J performs the intratheater portion of the airlift mission and is a platform for dropping troops and equipment into hostile areas. The C-130J aircraft is a medium-range, tactical aircraft and is the newest upgrade to the C-130 fleet. Enhancements include a modern glass cockpit with digital avionics, an improved electrical system, new engines and propellers, and an enhanced cargo handling and delivery system. In addition, the C-130J aircraft requires only a three-person flight crew instead of the five-person flight crew that the previous H-version required. Lockheed Martin, the manufacturer, discontinued production of the H version in 1997 and promoted the C-130J as a commercial aircraft.

Results. We substantiated the allegation that the C-130J aircraft does not meet contract specifications and therefore cannot perform its operational mission. The Air Force conditionally accepted 50 C-130J aircraft at a cost of \$2.6 billion even though none of the aircraft met commercial contract specifications or operational requirements. The Air Force also paid Lockheed Martin more than 99 percent of the C-130J aircraft's contracted price for the delivered aircraft. As a result, the Government fielded C-130J aircraft that cannot perform their intended mission, which forces the users to incur additional operations and maintenance costs to operate and maintain older C-130 mission-capable aircraft because the C-130J aircraft can be used only for training. The Assistant Secretary of the Air Force for Acquisition should stop the System Program Office from contracting for additional block upgrades until a contract-compliant aircraft is designed, developed, and delivered; use Federal Acquisition Regulation Part 15 for future modifications that add to the scope of the statement of work to the C-130J multiyear contract (F33657-03-C-2014); increase contract withhold amounts for acceptance of noncompliant aircraft; and develop a schedule for completing outstanding retrofits to accepted and fielded aircraft. (See the Finding section of the report for the detailed recommendations.)

Management Comments and Audit Response. The Assistant Secretary of the Air Force for Acquisition nonconcurred with the finding and recommendations. The Assistant Secretary stated that the commercial acquisition strategy of the C-130J was legitimate, the Air Force properly managed the program, and DoD provided effective oversight. The Assistant Secretary stated that Lockheed Martin is delivering contract-compliant C-130J aircraft, and that upgrades are necessary to meet DoD requirements. He also stated that the use of Federal Acquisition Regulation Part 12 was appropriate. In addition, withholds were consistent with the contract, and the Air Force did not have problems motivating Lockheed Martin to correct within-scope deficiencies. The Assistant Secretary also stated that all outstanding retrofits had been scheduled or completed.

The Assistant Secretary's comments were nonresponsive to the report and its recommendations. We do not agree with the Assistant Secretary's comments and stand by our finding and intent of the recommendations. Because the Air Force had already accepted noncompliant aircraft, visibility on modification and development costs are lacking, the multiyear contract has already been awarded, and it would require a bilateral agreement to change the terms and conditions of the contract, we revised the recommendation from changing the existing multiyear contract terms and conditions to using Federal Acquisition Regulation Part 15 for future modifications that add to the scope of the work of the multiyear contract. The commercial acquisition strategy was unjustified, the Air Force did not properly manage the program, and the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics did not provide effective oversight. The Air Force bought the C-130J as a commercial item needing minor modification, but in the 8 years since the Air Force began contracting for the C-130J, Lockheed Martin has been unable to design, develop, or produce a C-130J aircraft that meets contract specifications. In addition, the Air Force did not determine whether the commercial version of the C-130J met the operational requirements before procuring the aircraft. The Air Force C-130J withholds do not correlate with C-130J aircraft outstanding contract deficiencies, nor do current levels of withholds ensure that corrections are performed in a timely manner. All contract deficiencies should be resolved and retrofits should be performed before the Air Force funds additional upgrades. We request that the Assistant Secretary of the Air Force for Acquisition provide comments on the final report by August 23, 2004.

Although not required, the Director, Operational Test and Evaluation in the Office of the Secretary of Defense provided comments on the report. See the Management Comments section of the report for the complete text of the comments.

See the Finding section of the report for a discussion of the Assistant Secretary of the Air Force for Acquisition's comments and the Management Comments section of the report for the complete text of the comments.

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Background

We performed this audit in response to allegations to the Defense Hotline concerning the Defense Contract Management Agency's oversight of Lockheed Martin's performance on the C-130, F-22, and C-5 aircraft. This is the third and final report concerning the allegations. Specifically, this report addresses the allegation which states that the C-130J Aircraft does not meet contract specifications and therefore cannot perform its operational mission.

Congressional Authorization and Appropriation. Congress authorized and appropriated about \$4 billion for the acquisition of the C-130J aircraft for FYs 1996 through 2004. About \$2.3 billion of the \$4 billion were congressional increases to the Services' budget requests. In 2003, the DoD submitted a request for approval of a multiyear contract for the C-130J aircraft. The 2003 Authorization Conference Report 107-772 authorized multiyear procurement authority for the C-130J aircraft program.

C-130J Aircraft. The primary mission of the C-130J remains unchanged from the existing C-130 fleet. The C-130J performs the intratheater portion of the airlift mission and is a platform for dropping troops and equipment into hostile areas. The Air Mobility Command, Theater Commands, Air National Guard, Air Force Reserve, Air Force Special Operations Command, Marine Corps, and Coast Guard use the C-130 aircraft fleet in peace and war missions. The C-130J aircraft is a medium range, tactical aircraft and is the newest upgrade to the C-130 fleet. Specialized versions of the aircraft include the C-130J Stretch where the cargo floor length of the aircraft is increased from 40 feet to 55 feet, the WC-130J that performs weather reconnaissance missions, the EC-130J that performs electronic warfare missions, the KC-130J that performs air-refueling missions, and the HC-130J that performs search and rescue missions. In this report, all aircraft will be referred to as the C-130J unless the discussion relates to a specific aircraft version.

Enhancements for the C-130J aircraft include a modern glass cockpit with digital avionics, an improved electrical system, new engines and propellers, and an enhanced cargo handling and delivery system. In addition, the C-130J aircraft requires only a three-person flight crew instead of a five-person flight crew that the previous C-130H version required. Lockheed Martin, the manufacturer, discontinued production of the military C-130H version in 1997 and promoted the C-130J as a commercial aircraft to replace aging C130 aircraft.

C-130J Program Information. The Under Secretary of Defense for Acquisition, Technology, and Logistics designated the C-130J Program as an Acquisition Category IC* program and assigned the Air Force acquisition executive as the milestone decision authority. The Air Force Contracting Officer determined that the C-130J aircraft was a commercial item that would meet the Government's needs with minor modification.

* Acquisition Category IC programs are Major Defense Acquisition Programs with expenditures for research, development, test, and evaluation of more than \$355 million or procurement of more than \$2.135 billion. The milestone decision authority is the Component head, or Service acquisition executive.

Lockheed Martin developed and produced the C-130J aircraft using a commercial aircraft model performance specification. Lockheed Martin initiated the C-130J upgrade and managed the program development, developmental testing, and production process. Because the Air Force contracting officer determined that the C-130J aircraft was a commercial item, the Air Force did not apply the normal milestone decision process to this program. The only DoD acquisition decision was whether to buy the C-130J aircraft, which was based on force structure requirements and system affordability.

Based on the congressional authority to purchase C-130J aircraft, the Air Force decided to buy the aircraft in the quantities authorized. Because of the contracting officer's decision to designate the aircraft as a commercial item, Federal Acquisition Regulation Part 15, Contracting by Negotiation, which allowed access to contractor cost and pricing data as well as other Government oversight, did not have to be applied to the C-130J procurement. In total, the Air Force contracted for 117 C-130J aircraft for the Air Force, Marine Corps, and Coast Guard at a cost of \$7.45 billion. As of December 31, 2003, the Air Force had accepted 50 C-130J aircraft at a cost of \$2.6 billion.

Objectives

The overall audit objective was to determine whether the allegation that the C-130J aircraft does not meet contract specifications and therefore cannot perform its operational mission has merit. We determined that the allegation had merit, which resulted in our report. See Appendix A for a complete discussion of the audit scope and methodology.

Contracting for and Management of the C-130J Program

The Air Force conditionally accepted 50 C-130J aircraft at a cost of \$2.6 billion even though none of the aircraft met commercial contract specifications or operational requirements. The Air Force also paid Lockheed Martin more than 99 percent of the C-130J aircraft's contracted price for the delivered aircraft, leaving the contractor little financial incentive to correct deficiencies. These conditions occurred because:

- The Air Force contracting officer did not properly justify the use of a commercial item acquisition strategy;
- The Air Force did not adequately manage the program operation;
- The contracts did not provide sufficient financial incentives for delivering compliant aircraft; and
- The Office of the Secretary of Defense did not provide effective oversight of the C-130J Program to correct significant program deficiencies.

As a result, the Government fielded C-130J aircraft that cannot perform their intended mission, and the users incurred additional operations and maintenance costs to operate and maintain older C-130 aircraft as well as the C-130J aircraft.

Criteria

Federal Acquisition Regulation. Federal Acquisition Regulation Subpart 2.1, "Definitions," September 2001, states that a commercial item is customarily used for nongovernmental purposes, and has been sold or offered for sale, lease, or license to the public. A commercial item can also require minor modifications not customarily available in the commercial marketplace to meet Federal Government requirements. Minor modifications do not significantly alter the nongovernmental function or essential physical characteristics of an item or component or change the purpose of a process. The Government contracting officer determines whether an item that is proposed as commercial is actually commercial or can be modified in some minor way to meet the Government's needs.

DoD Guidance. DoD Instruction 5000.2, "Operation of the Defense Acquisition System," May 12, 2003, requires that test and evaluation determine the effectiveness and suitability of a system under realistic operational conditions, including combat, determine whether the thresholds in the approved operational requirement document and the critical operational issues have been satisfied, and assess impacts on combat operations.

Conditional Acceptance of C-130J Aircraft

From 1999 to 2003, the Air Force conditionally accepted 50 C-130J aircraft at a cost of \$2.6 billion even though none of the aircraft met commercial contract specifications or operational requirements. In addition, the Air Force paid more than 99 percent of the contract price for the 50 conditionally accepted aircraft; withholding less than 1 percent as incentive to fix noncompliant issues. Table 1 shows the number of aircraft by Component and year.

Table 1. Aircraft Delivery Schedule
(As of December 31, 2003)

Year	Air Force Reserve	Air National Guard	Marine Corps	Coast Guard	Total
1999	7	7	0	0	14
2000	1	4	1	0	6
2001	2	4	7	0	13
2002	4	2	1	1	8
2003	0	1	3	5	9
Total	14	18	12	6	50

The C-130J aircraft delivered to the Government did not meet the commercial model specification. Lockheed Martin delivered all 50 aircraft with a Letter of Temporary Exception. The Letter of Temporary Exception documented the differences between the actual configuration of the C-130J aircraft delivered and the commercial specification incorporated in the contract. In addition, Air Force testing disclosed many deficiencies in aircraft operational performance and suitability.

Air Force and Navy testers and the C-130J users generated deficiency reports that addressed commercial model specifications and operational deficiencies. The deficiencies fell into two categories. Category 1 deficiencies could cause death, severe injury or illness, major loss of equipment or systems, or directly restrict combat or operational readiness, if uncorrected. Category 2 deficiencies were all other deficiencies that did not meet the criteria of Category 1. Table 2 shows the number of open and closed deficiency reports generated on the C-130J Program as of December 31, 2003.

Table 2. C-130J Deficiency Reports
(As of December 31, 2003)

	Category 1	Category 2	Total
Open	33	151	184
Closed	135	532	667
Total	168	683	851

Lockheed Martin and the Government must retrofit previously delivered aircraft as the deficiency reports are closed and corrections implemented.

Air Force Acquisition Strategy

The Air Force used an unjustified commercial item acquisition strategy to acquire the C-130J aircraft. The Government contracting officer's justification stated that the C-130J aircraft was a commercial item because the C-130J aircraft had evolved from a series of Lockheed Martin-developed and produced commercial aircraft configurations certified by the Federal Aviation Administration. The contracting officer stated that the C-130J included Lockheed Martin-developed advances in technology and performance. The contracting officer's justification also stated that the aircraft would be available in the commercial marketplace by the time of delivery under a Government contract. In addition, the Government contracting officer included in his justification a statement that only minor modifications to the commercial aircraft would be required to fulfill Government needs. Based on the contracting officer's commercial item determination, the Air Force adopted a commercial item acquisition strategy for the C-130J aircraft.

The contracting officer's justification that the aircraft was commercial and the decision to pursue a commercial acquisition strategy were flawed in several ways. First, the contracting officer stated that 95 percent of the features between the military and civilian versions of the aircraft were the same. However, Air Force contracting personnel could not provide the evidence to support that statement. The contracting officer also stated that the aircraft evolved from a series of Lockheed Martin-produced commercial aircraft. However, the most current prior version, the C-130H was only used for government purposes. The contracting officer also could not produce support for the determination that modification to include customer requirements would be minor. The Air Force was also unable to show that the commercial specification was compared to operational requirements and would meet Government needs. This flawed justification and decision led to a number of problems.

As a result of the commercial specification not meeting user needs, the Air Force and Marine Corps decided to revise their requirements documents to reduce the initial capabilities required and to satisfy operational requirement deficiencies through block upgrade programs at the Government expense. Essentially, what began as a contract to obtain a commercial aircraft that would meet the Government's needs with minor modification evolved into efforts by the Air Force to manage the C-130J as a spiral development at additional expense to the Government.

In addition, by acquiring the C-130J as a commercial item, using Federal Acquisition Regulation, Part 12, "Acquisition of Commercial Items," the Government did not apply the normal acquisition milestone decision process and limited program oversight. Also, because the Air Force acquired the C-130J aircraft using Federal Acquisition Regulation, Part 12, the Air Force contracting official could not require Lockheed Martin to provide certified cost or pricing data. Therefore, without knowledge of Lockheed Martin's prices, costs, or profits, the Air Force contracting officer was limited in his ability to protect the Government against overpricing. In 1995, the price for the basic C-130J aircraft was \$33.9 million, but by 1998, the price had risen to \$49.7 million. The FY 2004 contract price for the C-130J Stretch aircraft is \$66.5 million.

Air Force Management

The Air Force did not adequately manage program operations or financing for the C-130J. Since 1996, the Air Force issued three, consecutive, firm-fixed-price contracts for the C-130J aircraft even though Lockheed Martin continued to show little progress in delivering contract-compliant aircraft. In addition, the Air Force did not withhold sufficient funds from Lockheed Martin to adequately motivate the contractor to build a compliant aircraft and correct deficiencies in delivered aircraft.

Operation. In October 1995, the Government contracted for the first two C-130J aircraft in a modification to the C-130H aircraft contract. Production for the initial C-130J aircraft began in 1996. Lockheed Martin originally planned to deliver the initial aircraft in July 1997 but did not deliver the aircraft until February 1999. In November 1996, the Government signed a 5-year option contract that resulted in the purchase of 35 C-130J aircraft.

In January 1999, the Air Force became aware that Lockheed Martin could not meet the C-130J commercial model specification and agreed to a contractor-initiated, three-phase, block upgrade program, consisting of block upgrades 5.1, 5.2, and 5.3. However, the Air Force continued to contract for additional aircraft and exercised options for more aircraft before the first aircraft was delivered.

Because Lockheed Martin was experiencing design, test, and qualification problems, the first two C-130J aircraft were not delivered until February 1999, and even those aircraft were conditionally accepted. In December 2000, the Air Force signed another 5-year option contract for 20 C-130J aircraft, even though Lockheed Martin still had not designed, developed, or delivered a C-130J aircraft that met the commercial model specification. Testing showed that even with the block 5.1, 5.2, and 5.3 upgrades, the aircraft was still not compliant with the commercial model specification or operational requirements.

In October 2002, 6 years after initial production, the Air Force and Lockheed Martin reached an agreement that the design would be considered compliant with the successful completion of an agreed-upon action plan. Corrections in the agreement are to be completed in block upgrade 5.4, which is scheduled for installation in 2005.

However, the Air Force commingled contract specification work with out-of-scope work in block upgrade 5.4. As a result, customers who cannot afford the cost of the out-of-scope work will not receive the upgrade needed to have compliant aircraft.

In March 2003, the Air Force made another poor decision to obtain approval from Congress to award a multiyear contract to purchase 60 additional C-130J aircraft. Section 2306b, title 10, United States Code requires a stable design for a multiyear contract. The design of the C-130J is not stable and the C-130J aircraft has not passed operational testing. Table 3 shows the number of C-130J aircraft purchased and delivered by contract, as of December 31, 2003.

Table 3. Number of C-130J Aircraft Purchased and Delivered
(As of December 31, 2003)

<u>Contract Number</u>	<u>Purchased</u>	<u>Delivered</u>
F33657-90C-0071	2	2
F33657-95C-2055	35	35
F33657-00C-0018	20	13
F33657-03C-2014	<u>60</u>	<u>0</u>
Total	<u>117</u>	<u>50</u>

In addition to the problems of upgrading the aircraft to obtain compliance, the 50 already accepted aircraft needed to be retrofitted to incorporate corrections that were required for the aircraft to adhere to the most current design configuration. Lockheed Martin and the Government have already performed numerous hours of retrofit work on fielded C-130J aircraft to make the required changes. Table 4 shows the estimated retrofit hours that Lockheed Martin and the Government still needed to perform on the 32 C-130J aircraft fielded to Air Force units, as of August 2003.

Table 4. Estimated Hours to Retrofit Air Force Aircraft
(As of August 2003)

<u>Component</u>	<u>No. of Aircraft</u>	<u>Estimated Hours Needed</u>	<u>Hours Scheduled</u>	<u>Hours Unscheduled</u>
Air Force Reserve	14	3,846	2,399	1,447
Air National Guard	18	5,683	2,351	3,332
Total	<u>32</u>	<u>9,529</u>	<u>4,750</u>	<u>4,779</u>

The 4,750 hours scheduled for retrofitting began in August 2003 and will be completed in August 2004. Lockheed Martin and the Government have not negotiated an implementation plan for the 4,779 unscheduled retrofit hours. In addition, until there is a stabilized design for the C-130J aircraft and all deficiencies are corrected, more retrofit hours will be generated and additional corrections will be needed. The Air Force was unable to provide an estimate of retrofit hours needed for the 12 Marine Corps or the 6 Coast Guard C-130J aircraft.

The above condition could have been alleviated if the Air Force had provided adequate financial incentives by withholding more funds.

Financial Incentive. The Air Force decisions for providing financing to Lockheed Martin were not sound, because Lockheed Martin had no incentive to produce a compliant aircraft or make timely corrections to fielded aircraft. The contracts were structured to provide payments based on completed events. A percentage was then paid for each event. The Air Force also increased the amount paid for earlier interim events with each new contract. For example, the original contract payment at aircraft assembly completion was 65 percent; payment increased to 75 percent on the second contract and to 85 percent on the current contract. The Air Force has paid almost the entire price of the aircraft

before aircraft acceptance inspection and delivery. The Air Force should have increased the amounts withheld to motivate Lockheed Martin to deliver aircraft that meet contractual requirements.

The Air Force could have and should have withheld sufficient money for the noncompliant items to motivate the contractor to timely fix deficiencies, but the Air Force managed the financing poorly and paid the contractor almost the full price of the aircraft on acceptance. Specifically, as of December 31, 2003, the Air Force paid Lockheed Martin approximately \$2.6 billion for the 50 conditionally accepted aircraft while withholding only \$22.6 million (see Table 5).

Table 5. Program Office Payments to Lockheed Martin
(As of December 31, 2003)

<u>Component</u>	<u>No. of Aircraft</u>	<u>Amount Paid</u>	<u>Amount Withheld</u>	<u>Contract Price</u>
Air Force Reserve	14	\$618,998,713	\$4,401,287	\$623,400,000
Air National Guard	18	936,854,587	245,413	937,100,000
Marine Corps	12	679,472,377	13,777,623	693,250,000
Coast Guard	6	353,369,586	4,230,414	357,600,000
Total	50	\$2,588,695,263	\$22,654,737	\$2,611,350,000

Office of the Secretary of Defense Oversight

In addition to the deficiencies in Air Force management of the C-130J aircraft, higher-level DoD officials were informed and involved in the decision process and should have acted to assist in correcting cost, schedule, and performance problems in the program. Since September 1995, when the Air Force became the milestone decision authority, the Office of the Under Secretary of Defense for Acquisition, Technology, and Logistics has provided limited oversight of the C-130J Program. However, officials in the Office of the Under Secretary of Defense were fully aware of the acquisition strategy, the changes to the operational requirements document, and the deficiency reports on the C-130J Program, but they did not act to assist the Air Force in correcting known problems or improve the management of the troubled program. Further, the Office of the Secretary of Defense supported the multiyear contract by submitting a report to Congress for approval of the multiyear contract, even though the C-130J design was not stable and the C-130 aircraft did not meet the contract model specification or operational requirements.

C-130J Operations and Maintenance

The Government has fielded C-130J aircraft that cannot perform its intended mission, and the users have incurred additional operations and maintenance costs to operate and maintain older C-130 aircraft as well as the C-130J aircraft.

Testing. Testers identified deficiencies that degrade system operations and prevent successful mission accomplishment. The Air Force Operational Test and Evaluation Center (AFOTEC) conducted a Qualification Operational Test and Evaluation (QOT&E) to evaluate and report on the operational effectiveness and suitability of the aircraft and to identify deficiencies that could affect the ability of the C-130J aircraft to accomplish its missions. AFOTEC used an operational test plan to lay out the testing approach for the C-130J Program. The plan identified a two-phase QOT&E approach. Phase 1 testing evaluated the C-130J air land mission in September 2000 and Phase 2 testing will evaluate the C-130J air drop mission. Phase 2 testing is scheduled for November 2005.

Phase 1 Testing. AFOTEC completed Phase 1 testing in September 2000, which showed that the C-130J aircraft was not effective or suitable for the air land mission. AFOTEC Report, “C-130J Hercules II Qualification Operational Test and Evaluation Phase 1 Report,” January 8, 2001, stated that the block 5.2 upgrade for the C-130J was not effective. Performance deficiencies included inadequate range and payload, immature software, lack of an automated mission planning system, and difficulties in cold weather operations. The report also stated that the C-130J aircraft was not suitable in its current configuration because its integrated diagnostic capability was poor, including high built-in-test false alarm rates and deficient technical orders. The Air Force stopped the suitability evaluation on August 30, 2000, due to the extent of the deficiencies identified. The report stated that many of the deficiencies noted in Phase 1 testing were programmed to be corrected in the block 5.3 upgrade.

Operational Assessment. AFOTEC performed an operational assessment on block upgrade 5.3 to assess the C-130J Program’s progress towards readiness for Phase 2 QOT&E testing. The “C-130J Hercules II Operational Assessment (1) Final Report,” November 2001, stated that the C-130J aircraft’s progress in the effectiveness area was rated “unsatisfactory.” AFOTEC identified that deficiencies remained in the defensive systems, global air traffic management compliance, the mission planning systems, interoperability with the existing C-130 fleet, training, publications, and the ground maintenance system. The report stated that the C-130J Program was also progressing unsatisfactorily in the suitability area. The report mentioned that the large number of open deficiency reports did not allow a definitive assessment of the operational impacts on C-130J performance.

Development schedule slips, system immaturity, and training issues caused AFOTEC to reschedule Phase 2 operational testing from July 2000 to November 2005. The deficiencies that AFOTEC found in block upgrade 5.3 necessitated the C-130J program office to make another block upgrade in block 5.4. Phase 2 QOT&E was aligned with contractor implementation of the block upgrade 5.4.

Operational Limitations. Deficiencies identified by the testers in the C-130J Program affected the aircraft’s ability to perform its missions. Based on the QOT&E test results, the Air Mobility Command determined the missions that the C-130J could safely perform and released users to perform those aircraft missions. Specifically, the Air Mobility Command released the C-130J to perform the following missions: basic air land, assault, overwater operations, and medical

evacuation. Operational limitations restrict the C-130J from performing night vision goggle operations, combat search and rescue, visual formation, global air traffic management, and air dropping paratroopers and containers. Because the aircraft performed poorly during testing, the Air Mobility Command could not release the C-130J to perform required heavy equipment air drop, coordinated aircraft positioning system/station keeping equipment formation, and hostile environment missions. The installation of block upgrade 5.4, which is scheduled for 2005, is intended to allow the C-130J to air drop paratroopers and containers and to perform night vision goggle operations, combat search and rescue, visual formation, global air traffic management, coordinated aircraft positioning system/station keeping equipment formation, and hostile environment operations. Installation of block upgrade 6.0, which is scheduled for installation in 2007, will allow the C-130J to perform heavy equipment air drop. Appendix B shows a summary of the effects on each unit receiving the C-130J aircraft.

C-130J. The basic aircraft is the C-130J. The primary mission of the C-130J aircraft to air land and air drop personnel and equipment remains unchanged from older versions of the C-130 aircraft. Testing has shown that the C-130J aircraft is not operationally effective or suitable. The 815th Air Squadron and the 135th Airlift Squadron have been nonoperational for more than 4 years since they replaced the C-130E with the C-130J aircraft. In addition, three Air National Guard components and one Air Force Reserve component have a combination of C-130H or E and C-130J aircraft. Those components must use the older C-130 aircraft to perform their assigned missions and use the C-130J mainly for training. Because of major differences between the earlier C-130 and the C-130J versions, pilots cannot be qualified on both aircraft, which causes an additional financial and personnel burden on units that must operate both aircraft simultaneously.

WC-130J. The WC-130 aircraft performs reconnaissance missions to provide information on hurricanes, tropical storms, and winter storms; however, the WC-130J aircraft cannot perform the hurricane reconnaissance mission because the radar has inadequate storm penetration. AFOTEC reported that all the weather reconnaissance missions were affected by sustainability of the propeller, which was damaged during all test missions. As a result, the Air Force Reserve component must operate its old WC-130 aircraft to perform the mission. Based on the Air Force schedule to fix the radar, the component will not be able to perform the hurricane hunter mission with the WC-130J aircraft until at least 2005. The propeller requires further testing before it can be determined whether the propeller can perform adequately for the weather mission. Propeller testing is scheduled during the 2004 hurricane season.

KC-130J. The KC-130J performs air land, air delivery, and air-refueling missions for the Marine Corps. The Navy Commander Operational Test and Evaluation Force conducted an operational evaluation of the KC-130J aircraft. The KC-130J Aircraft System Operational Evaluation OT-III A/B was performed from October 4, 2003, through January 9, 2004. The purpose of the test was to determine the operational effectiveness and operational suitability of the KC-130J for air land and air delivery missions (Block A), aerial refueling (Block B), and its readiness for fleet introduction. The report, "KC-130J Aircraft System Operational Evaluation OT-III A/B Report" April 21, 2004, stated the KC-130J

met or exceeded all effectiveness and suitability critical operational issue threshold values with the exception of availability, logistic supportability, and training. The evaluation did not include aircraft survivability equipment; therefore, the aircraft should only be employed in a permissive threat environment until aircraft survivability equipment testing is completed. The report stated that the KC-130J is operationally effective and suitable in a permissive threat environment and recommended full fleet introduction of the KC-130J for operational use in a permissive threat environment. DoD defines a permissive threat environment as an operational environment in which the host country's military and law enforcement agencies have control as well as the intent and capability to assist operations that a unit intends to conduct.

EC-130J, HC-130J. The EC-130J is to perform electronic warfare missions, and the HC-130J to perform search and rescue missions. The effects of C-130J performance deficiencies on the EC-130J electronic warfare missions and the HC-130J search and rescue missions have not yet been determined through testing.

Maintenance. Unit level maintenance officials stated that C-130J aircraft performance deficiencies caused an inability to support operations and schedule flights. Released missions for the C-130J were limited to training and basic air land, assault, overwater operations, and medical evacuation. An aircraft is fully mission capable if it can perform all of its assigned missions. An aircraft is partially mission capable if it can perform at least one but not all of its assigned missions. The aircraft is not mission capable if it cannot perform any of its assigned mission. Because it did not pass operational tests, the C-130J is not capable of performing many of its planned missions.

The mission capability rate for the C-130J indicates that the aircraft is able to perform only those missions it has been released to perform and not all the missions that it is assigned to perform. The mission capability rates for the C-130J are lower than the rates for the older C-130 versions, even though it has not been released to perform all the C-130 missions. For the released missions, the C-130J aircraft was available for use at a rating of 50.4 percent in 2002 and 62.4 percent in 2003.

The C-130J has a high rate of built-in-test false detections that have resulted in decreased availability and increased maintenance time and costs. The built-in-test false detection rate means that unnecessary maintenance is performed and functional line replaceable units are removed, which, in turn, increases the number of spare parts and maintenance hours needed to maintain the aircraft.

In addition, the immaturity of the C-130J aircraft design means that unit maintenance personnel must spend available time correcting deficiencies for block upgrade modifications, testing, and system reliability, which increases aircraft downtime and creates a strain on personnel. The high number of workarounds has caused user personnel frustration and additional maintenance hours and costs.

Conclusion

The Government purchased the C-130J as a commercial item needing minor modifications to meet operational requirements, but Lockheed Martin has been unable to design, develop, and manufacture an aircraft that meets commercial model specifications. Since first contracted for in 1995, the C-130J aircraft has not met the operational requirements of the users and the design has not stabilized. Testers and users have identified many aircraft deficiencies that affect the satisfaction of the commercial model specifications and the operational requirements. Further, the conditional acceptance of and near full payment for noncompliant C-130J aircraft unnecessarily increased the Government cost risk on the C-130J Program and reduced the incentive for Lockheed Martin to correct deficiencies. In addition, because the aircraft was designated as a commercial aircraft and acquired under Federal Acquisition Regulation Part 12, the Air Force did not have contractor certified information on contract prices, costs, or profits and therefore was limited in its ability to protect the Government against possible overpricing.

Management Comments on the Finding and Audit Response

The Assistant Secretary of the Air Force for Acquisition nonconcurred with the finding. The Assistant Secretary stated that the Air Force followed regulatory mandates and processes to determine and validate the commercial acquisition strategy. In addition, the Assistant Secretary stated that the commercial derivative of the C-130J aircraft is available in the commercial marketplace. The Assistant Secretary stated that the C-130J program is properly managed. The conditional acceptance of C-130J aircraft is consistent with the terms and conditions of the contract, and withholds are based on an analysis of the price of deficient items. The Assistant Secretary also stated that the Office of the Secretary of Defense provided effective oversight of the C-130J Program.

We do not agree with the Assistant Secretary of the Air Force for Acquisition's comments. The Air Force bought the C-130J as a commercial item needing minor modification. The contracting officer did not support the basis for his decision. That Lockheed Martin has been unable to design, develop, or deliver the contracted for C-130J aircraft for 8 years casts serious doubt on the commercial nature of the purchase. Also, the conditional acceptance of and payment for noncompliant C-130J aircraft unnecessarily increased the Government's cost risk on the C-130J Program and reduced the incentive for Lockheed Martin to correct deficiencies. Although DoD officials were fully aware that the C-130J design was not stable and that the C-130 aircraft did not meet the contract model specification or operational requirements, they did not assist the Air Force in an oversight capacity to correct known problems or to improve the management of the troubled program.

Although not required, the Director, Operational Test and Evaluation of the Office of the Secretary of Defense commented that the Air Force did not apply the

normal milestone decision process to this program and the only Government acquisition decision was to buy or not buy the C-130J aircraft based on force structure requirements and system affordability.

Recommendations, Management Comments, and Audit Response

Revised Recommendation. As a result of management comments, we revised draft Recommendation 2. to require a change to future multiyear contract modifications.

We recommend that the Assistant Secretary of the Air Force for Acquisition:

1. Refrain from contracting for additional block upgrades until Lockheed Martin can design, develop, and deliver a contract compliant aircraft.

Air Force Comments. The Assistant Secretary of the Air Force for Acquisition did not concur with the recommendation. The Assistant Secretary stated that Lockheed Martin is already delivering C-130J aircraft that are compliant with the contract specification. The Assistant Secretary stated that the baseline C-130J aircraft is the same as the commercial derivative and only the military unique modifications are developmental. As provided in the contract, the Government evaluates the condition of the aircraft before each aircraft delivery and may accept an aircraft with minor deficiencies. The Assistant Secretary stated that additional block upgrades are required to meet DoD-mandated requirements and a delay would be detrimental to the Air Mobility Command mission. In addition, he stated that the Air Force is revising its operational requirements document to reflect a spiral approach.

Audit Response. The Assistant Secretary of the Air Force for Acquisition's management comments were nonresponsive. We disagree with the Assistant Secretary's comments. Not one C-130J delivered aircraft was fully compliant with the contract specification. In addition, the Air Force did not ensure that the purchased C-130J aircraft met the operational requirements of the user. The revision of the operational requirements document to a spiral approach is a reduction of initial capabilities that the user required. All contract deficiencies should be resolved and retrofits should be performed before the Air Force funds additional upgrades.

We request the Assistant Secretary of the Air Force for Acquisition to reconsider his position and provide additional comments on the final report.

2. Use Federal Acquisition Regulation Part 15 for future modifications that add to the scope of the statement of work to the C-130J multiyear contract (F33657-03-C-2014). Proposals for modification should provide the Government with the contractor's pricing, cost, and profit data.

Air Force Comments. The Assistant Secretary of the Air Force for Acquisition did not concur with the original recommendation to change the multiyear contract to a Federal Acquisition Regulation Part 15 acquisition. The Assistant Secretary stated that the use of Federal Acquisition Regulation Part 12 was appropriate, based on the commercial nature of the C-130J aircraft. He stated that future upgrades to the C-130J aircraft will be contracted for under Federal Acquisition Regulation Part 15 because they are Government-financed enhancements to the C-130J aircraft.

Audit Response. We reconsidered the practicality of recommending that the multiyear contract be changed to a Federal Acquisition Regulation Part 15. Because the Air Force had already accepted noncompliant aircraft, visibility on modification and development costs are lacking, the multiyear contract has already been awarded, and it would require a bilateral agreement to change the terms and conditions of the contract, we revised Recommendation 2. to address future modifications that add to the scope of the statement of work to the C-130J multiyear contract (F33657-03-C-2014). We maintain our position that the contracting officer did not adequately support the determination that the C-130J aircraft was a commercial item as defined in Federal Acquisition Regulation Part 12. That Lockheed Martin has been unable to design, develop, or deliver the contracted for C-130J aircraft also casts serious doubt on that determination. By acquiring the C-130J using Federal Acquisition Regulation Part 12, the Air Force contracting official could not require Lockheed Martin to provide certified cost and pricing data. Accordingly, without knowing Lockheed Martin prices, costs, or profits, the Air Force contracting officer was limited in his ability to protect the Government from possible overpricing.

In response to the final report, we request the Assistant Secretary of the Air Force for Acquisition provide comments on the revised recommendation, which will require the use of Federal Acquisition Regulation Part 15 on all modifications to the C-130J multiyear contract (F33657-03-C-2014).

3. Increase amounts withheld to motivate Lockheed Martin to deliver an aircraft that meets contractual requirements.

Air Force Comments. The Assistant Secretary of the Air Force for Acquisition did not concur with the recommendation. The Assistant Secretary stated that withholds are consistent with the terms of the contract and are based on a Government analysis of the price of the noncompliant items. In addition, he stated that the Air Force has not had an issue with motivating Lockheed Martin to correct within-scope deficiencies.

Audit Response. The Assistant Secretary of the Air Force for Acquisition's management comments were nonresponsive. We disagree with the Assistant Secretary of the Air Force for Acquisition's comments. Lockheed Martin has not built or delivered a C-130J aircraft that met contractual requirements. All 50 C-130J aircraft delivered between 1999 and 2003 still require retrofit work to conform to contract requirements. As of December 31, 2003, 18 of the 50 delivered C-130J aircraft (36 percent) were paid in full and had no withholds despite the aircraft still having outstanding contract requirement deficiencies. As of April 30, 2004, 86 percent of the within-scope deficiencies were more than

2 years old. Accordingly, the amount of the withholds did not ensure that Lockheed Martin performed corrections in a timely manner.

We request the Assistant Secretary of the Air Force for Acquisition reconsider his position and provide additional comments on the final report.

4. Negotiate a firm schedule for completion of known outstanding retrofits of fielded aircraft within 6 months.

Air Force Comments. Although the Assistant Secretary of the Air Force for Acquisition did not concur with the recommendation, his comments were responsive. The Assistant Secretary stated that all outstanding retrofits have been scheduled or completed.

Audit Response. Although the Air Force nonconcurred with the recommendation, the stated Air Force actual or planned action meets the intent of the recommendation. However, we request additional management comments on the final report that identify when all C-130J aircraft retrofits are scheduled for completion.

Appendix A. Scope and Methodology

We performed audit work to examine an allegation made to the Defense Hotline that the C-130J aircraft did not meet contract specifications and therefore cannot perform its operational mission.

We reviewed documents dated from September 1995 through December 2003. We reviewed policies for commercial acquisitions, operational testing, and weapon system operations and maintenance. We discussed the allegations with the complainants. We reviewed the C-130J Program documents, operational requirement documents, operational test reports, and contract files. We interviewed officials in the DoD, the Air Force, the Navy, the Marine Corps, the Defense Contract Management Agency, and the Federal Aviation Administration.

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

Limitations. We did not review the management control program because the audit focused on whether the allegation that the C-130J aircraft does not meet contract specifications and therefore cannot perform its operational mission has merit.

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

General Accounting Office High-Risk Area. The General Accounting Office has identified several high-risk areas in DoD. This report provides coverage of the DoD weapons acquisition process high-risk areas.

Related Coverage

During the last 5 years, the Inspector General of the Department of Defense (IG DoD) issued three audit reports and one investigative report discussing commercial aircraft acquisition strategy and related allegations on the C130H aircraft and the C-5 aircraft spare parts. Unrestricted Inspector General of the Department of Defense audit reports can be accessed at <http://www.dodig.osd.mil/audit/reports>.

IG DoD

IG DoD Report No. D-2004-064, "Acquisition of the Boeing KC-767A Tanker Aircraft," March 29, 2004. This report determined that the Air Force plans to use a similar sole-source commercial item acquisition strategy for the tanker with a fixed-price contract. The Boeing KC-767A Tanker Program does not meet the statutory definition of a commercial item. No commercial market for this aircraft exists to establish reasonable prices by the forces of supply and demand.

Consequently, the commercial item procurement strategy did not provide the Air Force with sufficient cost or pricing data to make multi-billion dollar decisions for the Boeing KC-767A Tanker Program and did not demonstrate to an independent reviewer the level of accountability needed to conclude that the prices negotiated represented a fair expenditure of DoD funds.

IG DoD Report No. D-2004-054, "Allegations of the Defense Contract Management Agency's Performance in Administering Selected Weapon Systems' Contracts," February 23, 2004. The report included an allegation that the Government paid an excessive price for a C-5 aircraft bracket. This allegation was not substantiated because a final price for this part had not been negotiated. However, a related Defense Criminal Investigative Service report (report cited below) found that cost or pricing data in the proposal that included this part was based on false information.

IG DoD Report No. D-2003-115, "Allegations Concerning the Administration of Contracts for Electronic Flight Instruments on the C-130H Aircraft," June 30, 2003

Defense Criminal Investigative Service, Criminal Vulnerability Report No. 2002-01, November 28, 2001. The report discussed the lack of appropriate controls and contract requirements in the procurement of spare parts for the C-5 aircraft, which were based on cost and pricing data that were known to be false and purposely overstated. The report recommended that the Defense Supply Center, Richmond, Virginia, and the Defense Contract Management Agency, Marietta, Georgia, review procedures and controls and implement appropriate action to ensure that future contracts are negotiated based on current, accurate, and complete cost and pricing data.

Appendix B. Mission Capability Limitations in the Air Force Reserve, Air National Guard, Marine Corps, and Coast Guard

The C-130J aircraft were fielded to operational units in the Air Force Reserve, Air National Guard, Marine Corps, and Coast Guard. A summary of each unit is below.

Air Force Reserve

815th Air Squadron. The 815th Air Squadron located at Keesler Air Force Base in Biloxi, Mississippi, performs the intratheater portion of the airlift mission and is a platform for dropping troops and equipment into hostile areas. The 815th Air Squadron has received four C-130J aircraft and expected to receive an additional four by 2005. The 815th Air Squadron has been converting from the C-130E aircraft to the C-130J aircraft since 1999. Because the C-130J aircraft has not been released to air drop troops and equipment, the unit is unable to perform their mission. The unit is not operational and does not report readiness.

53rd Weather Reconnaissance Squadron. The 53rd Weather Reconnaissance Squadron located at Keesler Air Force Base in Biloxi, Mississippi, performs hurricane, tropical storm, and winter storm reconnaissance. The 53rd Weather Reconnaissance Squadron has received eight WC-130J aircraft; however, they cannot perform the hurricane mission. The 53rd Weather Reconnaissance Squadron must maintain both H and J aircraft fleets.

Air National Guard

135th Airlift Squadron. The Maryland Air National Guard 135th Airlift Squadron performs the intratheater portion of the airlift mission and is a platform for dropping troops and equipment into hostile areas. The 135th Squadron has been converting its weapon system since receiving the first C-130J aircraft in July 1999. The 135th Squadron has released its C-130E aircraft and now possesses eight C-130J aircraft. The unit is not operational and does not report readiness.

143rd Airlift Squadron. The Rhode Island Air National Guard 143rd Airlift Squadron performs the intratheater portion of the airlift mission and is a platform for dropping troops and equipment into hostile areas. The 143rd Squadron has the stretch version of the C-130J in which the cargo floor length of the aircraft is increased from 40 feet to 55 feet. The Squadron considers itself in a transition status rather than a conversion status because it has three C-130J aircraft and five C-130E aircraft. The C-130E aircraft are used to perform the mission.

146th Airlift Squadron. The California Air National Guard 146th Airlift Squadron performs the intratheater portion of the airlift mission and is a platform for dropping troops and equipment into hostile areas. The Squadron is transitioning from the C-130E to the C-130J aircraft. The Squadron has two C-130J aircraft but performs its mission with the Squadron's C-130E aircraft.

193rd Special Operations Wing. The 193rd Special Operations Wing at Pennsylvania Air National Guard provides unified and theater commanders with airborne information operations capabilities specializing in psychological operations broadcast capabilities to support worldwide combat operations, contingencies, and special operations missions. The unit has received two EC-130J Super J aircraft. In addition, three C-130J aircraft are being converted to EC-130Js Commando Solo aircraft at the Lockheed Martin-Palmdale facility. No EC-130J aircraft-specific testing has been performed to determine the deficiencies to the mission. The 193rd Special Operations Wing must use its EC-130E aircraft to perform its mission.

Marine Corps

The Marine Aerial Refueler and Transport Squadron 252 provides aerial refueling service in support of Fleet Marine Force air operations assault air transport of personnel, equipment, and supplies. The Squadron is converting to the KC-130J. The Squadron uses the KC-130J aircraft for training and its older aircraft to perform the mission. The KC-130J has been cleared for operational use in a permissive threat environment.

Coast Guard

No information was requested from the Coast Guard during the audit.

Appendix C. Audit Response to Comments on the Report

Our detailed response to comments from the Assistant Secretary of the Air Force for Acquisition on statements in the draft report follow. The complete text of these comments is in the Management Comments section of this report.

Commercial Item Acquisition Strategy. The Assistant Secretary of the Air Force for Acquisition nonconcurred with the finding. The Assistant Secretary stated that the Air Force followed regulatory mandates and processes to determine and validate the commercial acquisition strategy. The Assistant Secretary stated that the DoD IG ignored the fact that Lockheed Martin developed the C-130J at its own risk for the commercial and military marketplace. Also Lockheed Martin sold previous C-130 models commercially and currently offers the commercial derivative of the C-130J for commercial sales. The commercial derivative is substantially the same aircraft but also includes features not available in the commercial marketplace. The Lockheed Martin C-130J Five-Year Option Contract dated December 1995 identified the cost of the Air Force-unique configuration of the C-130J as 6 percent of the total aircraft price. The Assistant Secretary also stated that the DoD IG is opposed to applying the acquisition of commercial items to major system procurements and misapplied the statutory and Federal Acquisition Regulation criteria applicable to commercial items for the C-130J aircraft.

Audit Response. We do not agree with the Assistant Secretary of the Air Force for Acquisition's comments. The Air Force used a commercial item acquisition strategy that was unjustified. The Air Force bought the C-130J as a commercial item needing minor modification. The contracting officer did not support the basis for his decision. Even if the commercial derivative is substantially the same aircraft as the C-130J, the fact that Lockheed Martin has been unable to design, develop, or deliver the contracted C-130J aircraft for 8 years casts serious doubt on the commercial nature of the purchase. The increase in costs to acquire the C-130J aircraft shows that the Government, not Lockheed Martin, bears the risk for the development of the C-130J aircraft. Even though Lockheed Martin has sold previous C-130 models commercially and currently offers the commercial derivative of the C-130J for commercial sales, there have been no sales of the C-130J commercial derivative aircraft (the L-100J). In addition, we are not opposed to applying the acquisition of commercial items to major system procurements when the item is justified as commercial.

Air Force Program Management. The Assistant Secretary stated that the C-130J Program is properly managed. The conditional acceptance of the C-130J aircraft is consistent with the terms and conditions of the contract, and withholdings are based on an analysis of the price of deficient items. The Assistant Secretary stated that the C-130J Program cost performance is tracking to the program budget and the contractor is meeting the delivery schedule. In addition, the Assistant Secretary stated that the program is within established acquisition guidelines and there have been no breaches to the approved acquisition program

baseline. The Assistant Secretary stated that insufficient Government personnel resources hampered evaluations of contract deficiencies.

Audit Response. The Air Force did not adequately manage the program operation and financing. The conditional acceptance of and payment for noncompliant C-130J aircraft unnecessarily increased the Government cost risk on the C-130J Program and reduced the incentive for Lockheed Martin to correct deficiencies. We did not determine whether the C-130J Program cost performance, delivery schedule, acquisition guidelines, or the approved acquisition program baseline were met. Our objective was to determine whether the C-130J aircraft met contract specifications and whether it could perform its operational mission. We determined that the Air Force conditionally accepted 50 C-130J aircraft at a cost of \$2.6 billion, even though none of the aircraft met commercial contract specifications or operational requirements.

Office of the Secretary of Defense Program Oversight. The Assistant Secretary also stated that the Office of the Secretary of Defense provided effective oversight of the C-130J Program. The Assistant Secretary stated that the Air Force provides quarterly Defense Acquisition Executive Summaries and annual Selected Acquisition Reports for the Office of the Secretary of Defense and congressional review. The Air Force and the Office of the Secretary of Defense have also established periodic Integrating Integrated Product Team meetings to review the status of the C-130J Program. The Assistant Secretary stated that the Office of the Secretary of Defense began expressing concern with the C-130J testing, program management, and performance in February 1999. The Assistant Secretary stated that combined efforts of the Air Force and the Office of the Secretary of Defense have resulted in more stabilized funding and close scrutiny of deficiency reports to resolve problems and meet requirements.

Audit Response. The Office of the Secretary of Defense did not provide effective oversight of the C-130J Program to correct significant program deficiencies. Although DoD officials were fully aware that the C-130J design was not stable and that the C-130 aircraft did not meet the contract model specification or operational requirements, they did not assist the Air Force in an oversight capacity to correct known problems or to improve the management of the troubled program. The Air Force signed a multiyear contract to purchase more C-130J aircraft that did not meet the commercial contract specification or operational requirements and that cannot perform their intended mission.

Appendix D. Report Distribution

Office of the Secretary of Defense

Under Secretary of Defense for Acquisition, Technology, and Logistics
Under Secretary of Defense (Comptroller)/Chief Financial Officer
Deputy Chief Financial Officer
Deputy Comptroller (Program/Budget)
Director, Operational Test and Evaluation
Director, Programs Analysis and Evaluation

Department of the Army

Auditor General, Department of the Army

Department of the Navy

Naval Inspector General

Department of the Air Force

Assistant Secretary of the Air Force for Acquisition
Assistant Secretary of the Air Force (Financial Management and Comptroller)
Director, Air National Guard
Chief of Air Force Reserve
Auditor General, Department of the Air Force

Other Defense Organizations

Director, Defense Contract Audit Agency
Director, Defense Contract Management Agency
Director, Defense Logistics Agency

Non-Defense Federal Organization

Office of Management and Budget

Congressional Committees and Subcommittees, Chairman and Ranking Minority Member

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

Department of the Air Force Comments



Office Of The Assistant Secretary

DEPARTMENT OF THE AIR FORCE
WASHINGTON DC

APR 29 2004

MEMORANDUM FOR OFFICE OF THE INSPECTOR GENERAL
DEPARTMENT OF DEFENSE

FROM: SAF/AQ

SUBJECT: Air Force Response to DoD IG Draft Report, "Contracting for and Performance of
the C-130J Aircraft," Project Number D2003AB-0084

Attached is the Air Force response in reply to your 25 Mar 2004 memorandum requesting
the Air Force review and comment on the subject report. The Air Force takes issue with all of
the DoD IG findings and recommendations.

If you require further assistance, feel free to contact my staff, Colonel Paul Stipe at (703)
588-7756 or Colonel John Zahrt at (703) 588-7740.

A handwritten signature in black ink, appearing to read "Marvin R. Sambur".

MARVIN R. SAMBUR
Assistant Secretary of the Air Force
(Acquisition)

Attachment:
AF Response to DoD/IG Draft Report

**Air Force Response to Office of the Inspector General, Department of Defense (DoD/IG)
Draft Report D2003AB-0084**

Executive Summary

The DoD/IG Report, "Contracting for and Performance of the C-130J Aircraft," Project Number D2003AB-0084 responds to allegations to the Defense Hotline concerning the Defense Contract Management Agency's oversight of Lockheed Martin's performance on the C-130, F-22, and C-5 aircraft. The allegation specifically addressed in the Report states that the C-130J aircraft does not meet contract specification and therefore cannot perform its operational mission. **The Air Force non-concurs with all the recommendations and findings within the DoD/IG report.** The report centers on three issues: 1) justification for commercial acquisition strategy, 2) management of program operation and financing, and 3) oversight by Office of the Secretary of Defense. The first finding relates to the C-130J program's origination—the determination that C-130J is a commercial program. The history and current uses of the C-130J (including the C-130J's commercial derivative, the L-100J) justify the Air Force position that the C-130J is a "commercial item" as defined by 41 U.S.C. § 403(12) and FAR 2.101. Second, the Air Force has properly managed the program operation and financing. The C-130J program is meeting cost, schedule, contract and regulatory commitments. Third, OSD did provide effective oversight. The Air Force provides quarterly reports to OSD on program progress and participates in oversight meetings with the OSD staff.

Findings and Responses: The subject report provides three findings, which are listed below with the Air Force responses:

Finding 1. "The Air Force used a commercial item acquisition strategy that was unjustified."

The Air Force non-concurs. A number of the recommendations are based on the DoD/IG's assertion that the C-130J is not a commercial acquisition and that the Air Force should utilize a traditional FAR Part 15 procurement approach to acquire the aircraft. The Air Force disagrees. The commercial item procurement strategy followed on this program is a legitimate business approach. The DoD/IG ignores the fact that the Lockheed Martin Corporation developed the C-130J at its own risk for the commercial and military marketplaces. Also, LMC has sold prior C-130 models commercially and currently offers the commercial derivative of the C-130J for commercial sales. The recent DoD/IG report on the KC-767 tanker program and this report's findings on C-130J commerciality, when viewed together, suggest that DoD/IG is opposed to applying the Congressional preference for the acquisition of commercial items to major system procurements. The DoD/IG has misapplied the statutory and FAR criteria applicable to commercial item acquisitions in this case.

Finding 2. "The Air Force did not adequately manage the program operation and financing."

The Air Force non-concurs. The C-130J program is properly managed—program cost performance is tracking to the program budget and the contractor is meeting the delivery schedule. Further, the program is within established acquisition guidelines and there have been no breaches of the approved acquisition program baseline. The C-130J program follows practices with regard to withholds employed on programs such as KC-135 GATM, C-17 and JPATS. Execution of C-130J withholds is consistent with the terms and conditions of the contract, as withholds are reasonably based on a government analysis of the price of any deficient items. The aircraft currently enjoys operational release for the following missions: airland, over-water, medical evacuation, and assault. Following procedure development, single ship low level and Night Vision Goggles (NVG) operations will be released in the summer of 2004. Heavy Airdrop and Personnel Airdrop operations will be released after Block 5.4 testing is complete.

Finding 3. “The Office of the Secretary of Defense did not provide effective oversight of the C-130J Program to correct significant program deficiencies.”

The Air Force non-concurs. The Air Force provides quarterly Defense Acquisition Executive Summaries and annual Selected Acquisition Reports for OSD and Congressional review. The Air Force and OSD have also established periodic Integrating Integrated Product Team meetings to continually review status of the program. This is consistent with the level of oversight of other ACAT IC programs and is effective. OSD began expressing its concern with C-130J testing, program management, and performance in February 1999. More recently, our combined efforts to improve the program have resulted in more stabilized funding and close scrutiny of deficiency reports to resolve problems and meet requirements. Furthermore, a new Operational Requirements Document is being written in conjunction with contracted Block 5.4 upgrades to meet realistic mission needs.

Recommendations and Responses: The subject report provides four recommendations which are listed below with the Air Force responses:

Recommendation 1. “Refrain from contracting for additional block upgrades until Lockheed Martin can design, develop, and deliver a contract compliant aircraft.”

The Air Force non-concurs. Timely Block Upgrades are required to meet DoD mandated Global Air Traffic Management and Navigation Safety requirements; a delay would be detrimental to the Air Mobility Command mission. Lockheed Martin is already delivering contract compliant aircraft. Prior to each delivery, the government carefully evaluates the condition of the aircraft and may accept an aircraft with minor deficiencies (codified in Letters of Temporary Exception) under the terms of the contract and established Air Force business practices.

Recommendation 2. “Change the C-130J multiyear contract from a FAR Part 12 contract to a FAR Part 15 contract. The contract specification in the renegotiated contract must meet the specification in the operation requirements document and provide the Government with the contractor’s pricing, cost, and profit data.”

The Air Force non-concurs. The use of FAR Part 12 was determined to be the most effective means of meeting the cost and schedule requirements of the multiyear aircraft acquisition and to be appropriate given the commercial nature of the C-130J aircraft. Future upgrades to the C-130J aircraft will be contracted under a FAR Part 15 arrangement that the Air Force considers more appropriate for government financed enhancements to the C-130J.

Recommendation 3. “Increase amounts withheld to motivate Lockheed Martin to deliver an aircraft that meets contractual requirements.”

The Air Force non-concurs. Withholds on the C-130J contract are consistent with the terms and conditions of the contract and are based on a government analysis of the price of any deficient items. We have not had an issue motivating Lockheed Martin to correct within-scope deficiencies.

Recommendation 4. “Negotiate a firm schedule for completion of known outstanding retrofits of fielded aircraft within 6 months.”

The Air Force non-concurs. All modifications of fielded Air Force and US Coast Guard aircraft are managed IAW TO 00-5-15, *Air Force Time Compliance Technical Order Process*. All known outstanding retrofits are scheduled and are being performed per this process. The US Marine Corp manages their own retrofit program IAW NAVAIRINST00-25-300, *Technical Directive System*. All outstanding USMC retrofits have been either completed or scheduled IAW this process.

Conclusion

The Air Force disagrees with all of the DOD/IG’s findings and recommendations. While some of the facts presented in the DOD/IG Report are accurate, the findings and conclusions ascribed to these facts cannot be supported. The Air Force fully endorses the C-130J program. The program is one of AMC’s top priorities and, in fact, is currently planned to be ready for a combat deployment no later than the end of 2004. The program has disciplined plans in place to meet the stated operational need and to continue to enhance the platform to meet DoD mandated initiatives and evolving AMC mission needs.

Detailed Comments

1. DoD/IG Findings, Recommendations and Air Force Responses: The subject Report offers three Findings and four Recommendations that are listed below with the Air Forces' detailed response.

Finding 1. "The Air Force used a commercial item acquisition strategy that was unjustified."

The Air Force objects to the DoD/IG's characterization of the commercial acquisition strategy as "unjustified." In fact, there was significant justification prepared, examined and validated at the highest levels of the Air Force before the acquisition of any C-130J aircraft. As evidenced in the Commercial Determination, Lockheed Martin had sold C-130 model aircraft in the commercial market place since the early 1960s. The Federal Aviation Authority (FAA) certified the aircraft design (382J) in 1998. Moreover, the commercial derivative of the C-130J aircraft, the L-100J, has been made available in the commercial marketplace:

- "The most recent addition to the L-100 family is the L-100J, a commercial derivative of the stretched new generation C-130J-30 Hercules II." www.worldwideairlink.com
- "The L-100J would be a commercial derivative of the new generation C-130J Hercules II. Improvements would include new 3425kW (4591 shp) Rolls-Royce (Allison) AE-2100D3 advanced turboprop engines driving six blade props, two crew Electronic Flight Instrument System EFIS flightdeck and significantly lower maintenance and operating costs. The C-130J first flew on April 5, 1996, while US FAA civil certification was awarded in September 1998." www.airliners.net.
- "The most recent addition to the L-100 family is the L-100J, a commercial derivative of the stretched new generation C-130J-30 Hercules II. Improvements include more powerful advanced turboprop engines and two-person EFIS flightdeck." www.aerosite.net.

The L-100J (382J) is substantially the same aircraft as the C-130J, sharing structure, landing gear, engines, propellers and cockpit/displays. The Air Force readily acknowledges that the C-130J also includes features not customarily available in the commercial marketplace, including aerial delivery (cargo and paratroop), defensive systems, secure voice communications, station keeping, night vision imaging and satellite communication. Notwithstanding these features, the C-130J still qualifies as a commercial item, as it satisfies the FAR 2.101 definition. FAR 2.101(a), "Commercial Item," (3) provides that commercial item means:

Any item that would satisfy a criterion expressed in paragraphs (1) or (2) of this definition¹], but for --

* * *

¹ Criterion 1 provides that a commercial item is "[a]ny item, other than real property, that is of a type customarily used by the general public or by non-governmental entities for purposes other than governmental purposes, and (i) [h]as been sold, leased, or licensed to the general public; or (ii) [h]as been offered for sale, lease, or license to the general public."

(ii) Minor modifications of a type not customarily available in the commercial marketplace made to meet Federal Government requirements. Minor modifications means modifications that do not significantly alter the nongovernmental function or essential physical characteristics of an item or component, or change the purpose of the process. Factors to be considered in determining whether a modification is minor include the value and size of the final product. Dollar values and percentages may be used as guideposts, but are not conclusive evidence that a modification is minor.

The Lockheed Martin C-130J Five Year Option Contract proposal dated December 1995 identified the cost of the USAF unique configuration of the C-130J as \$2.8M (6%) of the \$45.4M total aircraft price. The USAF unique modifications required were minor in size and value when compared to the value and size of the commercial product and limited to military-unique capability described above. The modification also did not significantly alter the aircraft's nongovernmental function (to transport people and cargo by air) nor does it alter the essential physical characteristics of the aircraft.

The US Air Force followed regulatory mandates and processes to determine and validate the commercial acquisition strategy. Based on the sound acquisition strategy, the US Air Force entered into a valid binding contract with Lockheed Martin for the production and delivery of the aircraft.

Finding 2. "The Air Force did not adequately manage the program operation and financing."

The Air Force non-concurs. Conditions for acceptance of the initial C-130J aircraft were that the design be FAA certified and military utility testing be completed. Lockheed Martin Corporation did not meet these conditions until 1998, thus delaying initial acceptance of the aircraft from Jun 1997 to Jan 1999. As a result of deficiencies identified during testing, the SPO was reluctant to accept the first six aircraft. Lockheed Martin provided a viable, contractor-funded plan to correct the deficiencies leading to basic airland capability that was available after Block 5.2. Block 5.3, also contractor-funded, was intended to bring the aircraft to specification compliance and in Lockheed Martin's view it accomplished that purpose. The Air Force disagreed and a number of disputed deficiencies remained open until they were adjudicated in 2002. The delay in reaching this milestone was primarily attributed to insufficient government personnel resources to accomplish the necessary evaluations. Throughout this period, the Air Force evaluated the impact of accepting aircraft with known minor deficiencies and concluded that the aircraft had sufficient utility to justify acceptance.

The contracts awarded for the C-130J resulted from Congressional initiatives to insert additional airlift capability into the USAF inventory. The two Five Year Option Contracts (FYOC) (awarded in 1996 and 2000) allowed the Air Force to respond to the initiatives efficiently, certainly demonstrating prudent management. Thirty of the 36 USAF aircraft procured under the two FYOCs were congressional adds.

The DoD/IG Report misstates the situation regarding retrofits. The Air Force tracks Time Compliance Technical Orders (TCTO) by content and required completion date. The reference to hours has no meaning for tracking implementation of TCTO's. All current TCTOs remaining to be accomplished have been scheduled for US Government users. As with all aircraft programs TCTOs will continue to be developed to support modification and repair of the aircraft fleet.

The Air Force does not negotiate payment schedules independent of the other contract aspects. It is our judgment that the payment associated with specific events on each contract is correct in the context of the entire contract and the effort expended by the contractor. In addition, the payment schedule is consistent with other USAF programs such as C-37, KC-135R/T GATM System and Next Generation Small Loader.

Finding 3. "The Office of the Secretary of Defense did not provide effective oversight of the C-130J Program to correct significant program deficiencies."

The Air Force non-concurs. The Air Force provides quarterly Defense Acquisition Executive Summaries and annual Selected Acquisition Reports for OSD and Congressional review. The Air Force and OSD have also established periodic Integrating Integrated Product Team meetings to continually review status of the program. This is consistent with the level of oversight of other ACAT IC programs and is effective. OSD began expressing its concern with C-130J testing, program management, and performance in February 1999. More recently, our combined efforts to improve the program have resulted in more stabilized funding and close scrutiny of deficiency reports to resolve problems and meet requirements. Furthermore, a new Operational Requirements Document is being written in conjunction with contracted Block 5.4 upgrades to meet realistic mission needs.

DoD/IG Recommendation 1: "Refrain from contracting for additional block upgrades until Lockheed Martin can design, develop, and deliver a contract compliant aircraft."

The Air Force non-concurs. The recommendation to curtail additional block upgrades hinges on the argument that the C-130J is entirely a military product, when, in fact, the baseline aircraft is the same as commercially derivative aircraft (L-100J) available to the public for nongovernmental purposes. Only select modifications are military unique. The fact that military unique upgrades are required to make the baseline commercial aircraft suitable for military operations is not a basis for concluding that the commercial configuration is still under development. In fact, it is only the military unique upgrades that are developmental. This is similar to numerous other commercial derivative platforms (e.g., C-32, C-37, C-40, and VC-25) that have baseline commercial configurations requiring military unique modifications. The report offers no assessment of the operational impact of suspending all upgrades. The adverse operational impact, however, is severe. Specifically, AMC's mission would be severely affected. The Block Upgrade program is planned around DoD mandated Global Air Traffic Management requirements intended to support the goals of Global Reach/Global Power. GATM makes extensive use of the international Civil Aviation Authority (Federal Aviation Authority in the US) initiative Communication Navigation Surveillance/Air Traffic Management. GATM is a

shift from Air Traffic Control to Air Traffic Management and failure to accomplish the initiatives in a timely manner will restrict international airspace access. AMC is currently revising their Operational Requirements Document (AMC 205-91-IV/III-A, Revision II, dated Sep 2003) to reflect a spiral approach to GATM compliance.

DoD/IG Recommendation 2. “Change the C-130J multiyear contract from a FAR Part 12 contract to a FAR Part 15 contract. The contract specification in the renegotiated contract must meet the specification in the operation requirements document and provide the Government with the contractor’s pricing, cost, and profit data.”

The Air Force non-concurs. As discussed above, the C-130J meets the FAR definition of “commercial item.” Accordingly, the FAR Part 12 acquisition strategy is entirely appropriate. Moreover, for the current contracts, such a conversion is not feasible. The contracts were negotiated bilaterally with a FAR Part 12 structure as a central term and condition. As such, Lockheed Martin is not bound to accept such a fundamental change. If they were to accept the change, it would likely entail a significant equitable adjustment. There are few precedents for reverting from a FAR Part 12 to a FAR Part 15 structure, although programs like the F117 engine and JPATS have evolved from FAR Part 15 to FAR Part 12.

The Air Force could not unilaterally dictate the change from FAR Part 12 to FAR Part 15 on current contracts without invoking a contract dispute, which would introduce significant litigation and programmatic risk for the Government. Simply stated, such a move by the Air Force would amount to a breach of contract.

Because the Air Force properly concluded that the C-130J was a commercial item, the Air Force is prohibited from seeking certified cost or pricing data from Lockheed Martin Corporation. FAR 15.403-1(b) provides that the contracting officer “*shall not* require submission of cost or pricing data to support any action (contracts, subcontracts, or modifications) * * * (3) [w]hen a commercial item is being acquired” (emphasis added). FAR 15.403-1(c)(3) further provides that “[a]ny acquisition for an item that meets the commercial item definition in 2.101, or any modification, as defined in paragraph (3)(i) or (ii) of that definition, that does not change the item from a commercial item to a noncommercial item, is exempt from the requirements for certified cost or pricing data.”

The Air Force has, however, recently awarded a FAR Part 15 contract to Lockheed Martin that will be used in support of the GATM program. Contracting under FAR Part 15 was determined to be appropriate to the nature of the work under contract, development of the GATM enhancements to the C-130J aircraft. Upgrades, starting with Block 6.0 are adding capabilities above and beyond the basic operational aircraft and are appropriately done under Far Part 15 procedures.

DoD/IG Recommendation 3. “Increase amounts withheld to motivate Lockheed Martin to deliver an aircraft that meets contractual requirements.”

The Air Force non-concurs. Two standard business practices apply to C-130J withholds: 1) The C-130J program determined and codified the withhold calculation methodology at the time

of contract award; and 2) the withhold amount is consistent with the value of the deficient item(s). Other programs following these standard practices include C-17, JPATS and KC-135R/T GATM. In addition, withholds on the C-130J contract are consistent with the terms and conditions of the contract and are based on a government analysis of the price of any deficient items. We have not had an issue motivating Lockheed Martin to correct within scope deficiencies.

DoD/IG Recommendation 4. “Negotiate a firm schedule for completion of known outstanding retrofits of fielded aircraft within 6 months.”

The Air Force non-concurs. All modifications of fielded Air Force and US Coast Guard aircraft are managed IAW TO 00-5-15, *Air Force Time Compliance Technical Order Process*. All known outstanding retrofits are scheduled and are being performed per this process. The US Marine Corp manages their own retrofit program IAW NAVAIRINST00-25-300, *Technical Directive System*. All outstanding USMC retrofits have been either completed or scheduled IAW this process.

Director, Operational Test and Evaluation



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APR 15 2004

MEMORANDUM FOR DoD INSPECTOR GENERAL

SUBJECT: Comments on Contracting and Performance of the C-130J Aircraft Draft Report

Thank you for the opportunity to comment on your report. I recommend that you change the sentence in the last paragraph of page 1 from "Because the Government . . ." to "*The Government did not apply the normal milestone decision process to this program. The only Government acquisition decision on whether to buy the C-130J aircraft was based on force structure requirements and system affordability.*"

My points of contact for this action are Tom Carter, (703 695-8978), Dr. Leonidas Sakell, (703 695-9085), or Matt Keough (703 693-7780).


Thomas P. Christie
Director

cc:
USD(AT&L)



Team Members

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