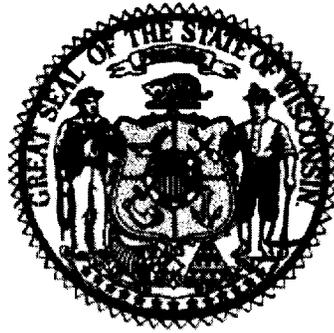


GENERAL MITCHELL AIR RESERVE STATION

MILWAUKEE, WI



July 19, 2005

Anthony Principi  
Chairman  
Defense Base Closure and Realignment Commission  
2521 South Clark St., Suite 600  
Arlington, VA 22202

Dear Chairman Principi:

As we stated at the St. Louis Regional Hearing, we believe that the decision to close General Mitchell Air Reserve Station (Mitchell) in Milwaukee, Wisconsin is not in the best interest of the United States Military. Furthermore, we are concerned that this decision might have been based on faulty and incomplete data as well as incorrect assumptions. Over the course of the next few days we will provide the Commission with the certifiable data that has led us to develop these conclusions.

In St. Louis we discussed the idea that Mitchell was being closed because of the desire of the active duty Air Force to recapitalize its C-130 fleet by taking the Reserve's newer model C-130s.

The following data forms the basis for our concern that the Air Force is using the BRAC process to accomplish this goal.

#### **Air Force's Aging C-130 Fleet**

A GAO report released in April 1998 (GAO/NSAID-98-108, page 1) states that the average age of the active duty C-130 fleet is 25 years, while the average age of the Guard and Reserve C-130 fleet is about 15 years (Attachment #1A/#1B - Complete GAO report).

MKE/1054813.1

### **Congressional Intent**

The same GAO report (Attachment #1A, page 6, 7) stated:

- From 1978 to 1998 Congress directed the procurement of 256 C-130 aircraft for the Guard and Reserve. The Air Force did not request these aircraft.
- Congress put language in the 1998 Defense Authorization Act for Fiscal Year 1998 and the Defense Appropriations Act for the same year that *specifically prohibited the retirement of Guard and Reserve C-130 aircraft*. This decision was opposed by the Air Force when it came to managing its C-130 fleet.

According to Christopher Bolkom at the Congressional Research Service, from 1990 to 2005 Congress mandated the procurement of 50 C-130s for the Guard and Reserve (Attachment #2).

Based on the age of the active duty C-130 fleet compared to the age of the Guard and Reserve fleet, we are concerned that the Air Force may have viewed the BRAC process as a way to get around Congressional intent concerning management of C-130s.

#### **Procurement of C-130J**

- While Congress was mandating the purchase of C-130s not included in the President's budget for the Guard and Reserve, the active duty Air Force was facing the possibility of not being able to procure new C-130Js because of a DoD Inspector General Report that was released in July of 2004 that concluded the C-130J could not perform its intended mission, which jeopardized future purchases of the aircraft (Attachment #3)
- The President's budget request for FY06, which was released February 2005, cancelled the C-130J multi-year procurement contract (Attachment #4 - page 94, Senate Report 109-69).

By the series of events surrounding procurement of the C-130s, it is appears that the Air Force and Congress could not reach agreement on the management or size of the C-130 fleet. Contributing to the confusion regarding the C-130 fleet was the President's proposed cancellation of the C-130J procurement contract.

#### **Base Closure Executive Group (BCEG) – Mitchell Last Minute Addition to BRAC in order to upgrade/modernize C-130 fleet**

As recently as March 3, 2005, Mitchell was being discussed as a potential candidate to receive an additional 8 C-130s (See Air Force BCEG minutes from its January 25, February 7 and March 3, 2005 meetings).

Then, at the April 7, 2005 BCEG meeting, the Air Force recommended the closure of Mitchell.

In a June 25, 2005 *Buffalo News* article Major General Gary W. Heckman, Chairman of the Air Force's Base Closure Executive Group, is quoted as saying that the closure of Mitchell and Niagara Falls Air Reserve Station came as a late addition to the BRAC list, and were added because the Air Force had a goal of giving more C-130 cargo planes to the active-duty forces (Attachment #5 - *Buffalo News* article).

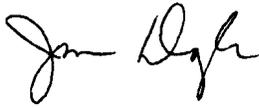
This series of events leads us to believe one of the reasons that Mitchell was added to the closure list was because it was a certain way for the active duty Air Force to modernize its fleet by taking planes from the Guard and Reserve.

**Summary**

Recapitalizing the active duty C-130 fleet by using the BRAC process is outside the scope of Congressional intent for both the purpose of BRAC and the management of the C-130 fleet. We are concerned these two issues played a role in the decision to close General Mitchell Air Reserve Station.

Thank you for your attention to this matter.

Sincerely,



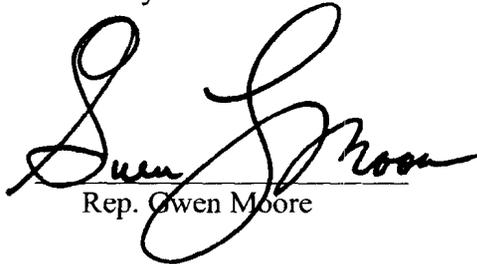
Gov. Jim Doyle



Sen. Herb Kohl



Sen. Russ Feingold



Rep. Owen Moore



Rep. Paul Ryan

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A/B





Report to the Honorable  
John McCain, U.S. Senate

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April 1998

# INTRATHEATER AIRLIFT

## Information on the Air Force's C-130 Aircraft



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National Security and  
International Affairs Division

B-274598

April 21, 1998

The Honorable John McCain  
United States Senate

Dear Senator McCain:

This report responds to your August 1997 request for information on the Air Force's C-130 program. Specifically, you asked us to answer the following questions.

- What is the mission of the current and planned C-130 fleet?
- What are the C-130 requirements for the Air National Guard and Air Force Reserve?
- What is the C-130 procurement history in the Guard and Reserve units?
- What are the Air Force plans for retiring excess C-130s in the Master Stationing Plan (MSP)?
- Is the Air Force's process for retiring C-130 aircraft when replacement aircraft become available effective?
- What is the Air Force C-130J requirement and what other alternatives were considered?
- What is the C-130J logistics support funding shortfall?

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## Background

The C-130 Hercules aircraft is a medium-range, tactical airlift aircraft designed primarily for transporting personnel and cargo. The aircraft was originally flown in 1954 and has been under continuous production ever since. The Air Force currently has approximately 700 C-130s of various configurations in its current C-130E and H fleet. The average age of the active duty C-130 fleet is over 25 years old, while the average age of the Guard and Reserve C-130s is about 15 years old. These aircraft are under the management and control of the Air Mobility Command (AMC)<sup>1</sup> and are operated by the active Air Force, the Air National Guard, and the Air Force Reserve.

The Air Force has just begun buying a new J model C-130. Lockheed Martin Corporation is developing the J aircraft as a commercial venture and expects it to (1) lower the cost of ownership of the fleet and (2) climb higher and faster, fly at higher cruise speeds, and take off and land in a shorter distance than the existing fleet. The J will have the same structural

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<sup>1</sup>The C-130 fleet was under the control of the Air Combat Command (ACC) from October 1993 until April 1997 when it was reassigned to AMC.

characteristics as previous C-130 models; however, it differs in that it includes, among other things, an advanced integrated digital avionics system, a new engine and composite propellers, a heads-up display, and a redesigned flight station to facilitate operation by a three-man versus a five-man crew. The J can also be bought in a stretched version.<sup>2</sup>

The aircraft is currently undergoing developmental tests and the Federal Aviation Administration (FAA) certification process is expected to end in June 1998. See appendix I for an illustration of the C-130J aircraft, along with the contractor's comparison of the capabilities for the C-130E, H, and J. At the time of our review, 23 Air Force C-130Js were on contract, with delivery of the first aircraft initially scheduled for December 1997. The schedule has slipped, however, and delivery of the first aircraft is now scheduled for October 1998. The schedule has been delayed due to technical problems and the pending FAA certification.<sup>3</sup>

The following sections provide the answers to each of your specific questions. Our scope and methodology for obtaining this information are discussed in appendix II.

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## What Is the Mission of the Current and Planned Fleet?

The current C-130 fleet is comprised of 12 different variants and the missions vary with each variant. While most of the current fleet is comprised of combat delivery aircraft, many of the C-130 variants perform specialized missions.

The combat delivery C-130 fleet, designated as C-130Es and C-130Hs, is used in a wide variety of wartime and peacetime missions. In wartime, the C-130 combat delivery aircraft primarily performs the intratheater portion of the airlift mission, leaving the long-range intertheater transport mission to larger aircraft such as the C-5 and C-17. These C-130s primarily provide rapid transportation of personnel or cargo for delivery by parachute to a designated drop zone, or by landing at austere locations within the conflict area. These aircraft are also the primary aeromedical evacuation aircraft in a conflict.

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<sup>2</sup>The stretched version, the C-130J-30, provides additional room in the aircraft so that more pallets or equipment can be carried.

<sup>3</sup>The C-130J aircraft is a military version of a commercial variant of the C-130J, which is called the 382J. The 382J must be FAA certified, and that certification must be completed before the military C-130Js can be delivered to the Air Force.

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In peacetime, the combat delivery C-130 is used for training flights, regularly scheduled channel operations,<sup>4</sup> and special assignment missions.<sup>5</sup> It is also used in fire fighting and humanitarian relief missions. For example, it has been used to airlift heavy equipment into remote areas of other countries to build airports and roads, and transport local goods.

In addition to the missions performed by the basic combat delivery C-130 aircraft, 11 other variants perform specialized missions. These missions include (1) weather reconnaissance, performed by the WC-130 aircraft; (2) special communication missions, performed by the EC-130 aircraft; and (3) search and rescue, performed by the HC-130 aircraft.

The 12 different C-130 models that are currently in the fleet and their respective missions are summarized in table 1.

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<sup>4</sup>Channel operations are regularly scheduled airlift service supporting multiple user organizations.

<sup>5</sup>Special assignment missions are exclusive airlift service to a single user to meet special requirements, such as a unit mobility exercise.

**Table 1: Summary of Air Force C-130 Aircraft Missions for Models Currently in the Fleet**

Totals as of January 12, 1998

<b>Model</b>	<b>Total no.</b>	<b>Primary missions</b>
AC-130H/U "Spectre"/ "Spectre" Gunship	21	Close air support, air interdiction, and armed reconnaissance
C-130E "Hercules" <sup>a</sup>	236	Intratheater airlift and airdrop; can operate from rough dirt strips and is used for delivering troops and equipment by parachute into hostile areas
C-130H "Hercules" <sup>a</sup>	286	Intratheater airlift and airdrop; can operate from rough dirt strips and is used for delivering troops and equipment by parachute into hostile areas
EC-130E "ABCCC"	7	Airborne battlefield command and control center
EC-130E "Commando Solo"	6	Psychological warfare—airborne radio and TV broadcast
EC-130E "Senior Hunter"	2	Airlift for the Air Force Intelligence Command, called the Senior Scout mission
EC-130H "Compass Call"	15	Jamming/electronic warfare
HC-130	30	Search and rescue
LC-130H	7	Ski-equipped for Antarctic and Arctic support of scientific activities
MC-130E/H "Combat Talon I/II"	38	Global day, night, adverse weather special operations airdrop
MC-130P "Combat Shadow"	28	Air refueling for special operation forces' helicopters in hostile territory and airdrop of special operations teams
NC-130 (A, E, H)	4	Test aircraft
WC-130H	10	Weather reconnaissance
<b>Total</b>	<b>690</b>	

<sup>a</sup>The C-130E and C-130H models are both combat delivery aircraft and are only separated in this table to identify amounts associated with each model design.

Source: Developed by GAO using data from Air Force and C-130 System Program Office.

Appendix III provides further details on these C-130 models.

The Air Force plans to buy the C-130J as a one-for-one replacement of C-130Es and C-130Hs as they reach their service life. Air Force officials told us that the basic missions of the C-130 fleet will not change when the new C-130J aircraft enter the fleet. However, it appears that these missions will be expanded. Specifically, Air Force officials told us that, as part of

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the Air Force's planned C-130J procurement, it is planning to buy the new stretched C-130J-30. We were further told that because this aircraft will provide more room/airplane capacity, it could be used to augment intertheater missions, like strategic brigade airdrops.<sup>6</sup> Final decisions regarding the procurement of the C-130J-30 and the aircraft's use, however, will not be made until fall 1998.

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## What Are the C-130 Requirements for the Air National Guard and Air Force Reserve?

At the time of our review, peacetime and wartime requirements for the Air National Guard and Air Force Reserve combat delivery aircraft inventory totaled 264 aircraft. Requirements for the Guard and Reserves' C-130 combat delivery aircraft are established in the Air Force's C-130 MSP, which was delivered to Congress in 1997.

The source of the requirements for these unit's special mission C-130s varied depending on the model. For example, we found that:

- The requirements for the weather reconnaissance WC-130 were set at 10 aircraft by Congress.
- The requirements for the ski-equipped LC-130, according to officials from the National Science Foundation (NSF) and Air National Guard, are set at 10 aircraft. These aircraft are used to conduct operations in support of military taskings and in support (deliver supplies, people, fuel, and scientific equipment) of the NSF's polar research missions.
- The requirements for the psychological warfare EC-130, the search and rescue HC-130, and adverse weather special operations MC-130 emanated from theater commander in chiefs. According to Air Force officials, the specific required number of these aircraft is classified.

Total combat delivery and special mission C-130 inventory for the Air Force Guard and Reserve<sup>7</sup> was 352 aircraft as of January 1998. Appendix IV shows the inventory and locations for these aircraft. As of March 1998, Air Force officials stated that decisions regarding their plans for the future C-130 inventory had not been made.

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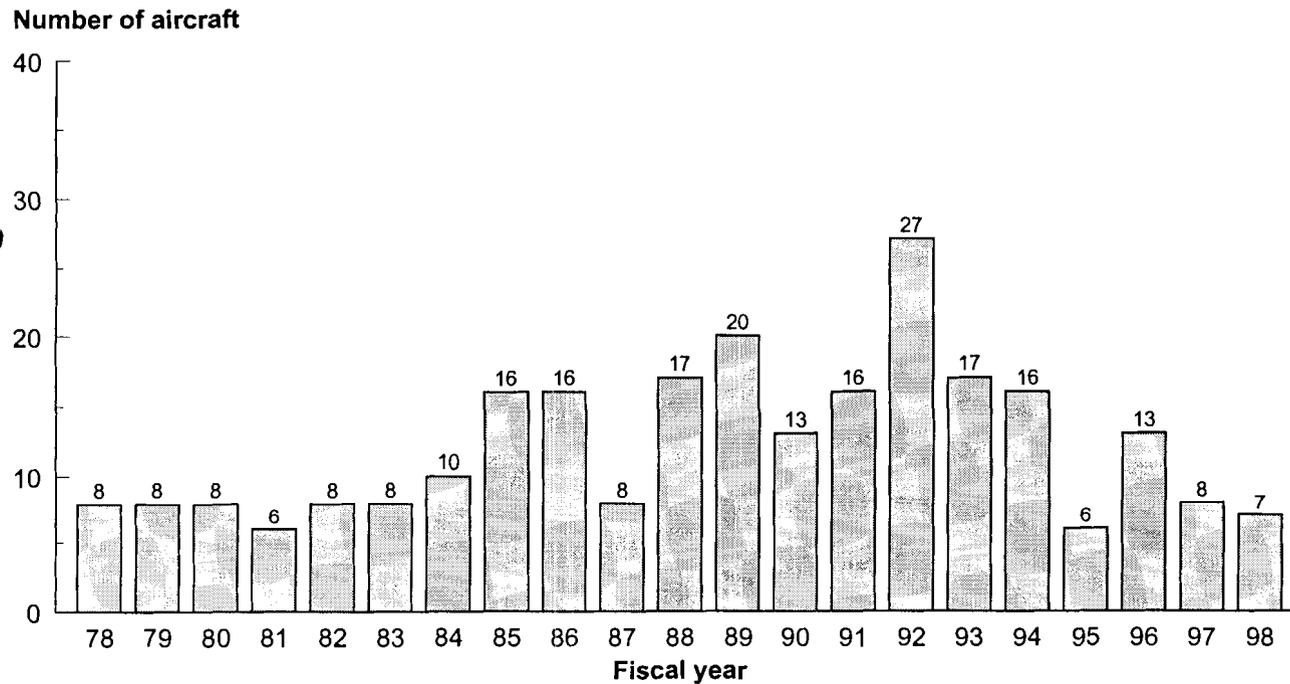
<sup>6</sup>Strategic brigade airdrop is the long-range delivery of an entire Army brigade and its equipment.

<sup>7</sup>Inventory for the remaining portions of this report covers C-130s authorized for performance of the units' mission and does not include the additional aircraft used for training and as backup for aircraft undergoing maintenance.

## What Is the C-130 Procurement History in the Guard and Reserve Units?

For the past 21 years, with the exception of five aircraft,<sup>8</sup> Congress has directed the procurement of C-130s for the Air National Guard and Air Force Reserve units. According to C-130 program officials, the Air Force has not requested these aircraft because aircraft in those units have many years of service life remaining. Figure 1 shows the annual procurement of the 256 aircraft that Congress directed for the Guard and Reserve since 1978.

Figure 1: Air Force, Air National Guard, and Air Force Reserve C-130H and C-130J Procurements From 1978 Through 1998



Source: Developed by GAO using Air Force, Air National Guard, and Air Force Reserve data.

<sup>8</sup>These five aircraft were originally requested by the Air Force for active Air Force units but were subsequently scheduled to go to the Reserves at Keesler Air Force Base in Mississippi.

## What Are Air Force Plans for Retiring Excess C-130s in the MSP?

Both the Joint Chiefs of Staff's (JCS) June 1996 Intratheater Lift Analysis<sup>9</sup> and the Air Force C-130 MSP<sup>10</sup> reviewed the service's combat delivery aircraft inventory and determined that there were more C-130s in inventory than required for military operations in Korea and Southwest Asia—the two major regional contingencies the Department of Defense (DOD) uses for force structure planning purposes.<sup>11</sup> About 50 C-130 aircraft were identified in the Air Force MSP as excess over requirements. Thirty of these were in the Air National Guard and Air Force Reserve units and the remaining were in the active duty force.

We were told that reductions in the active duty force structure was achieved by reclassifying some of the combat coded aircraft and designating others as ground trainers. Reductions in the Air National Guard were expected to be 24 aircraft (from 190 to 166 aircraft) and the Air Force Reserve Command units were to be reduced by 6 aircraft (from 104 to 98 aircraft). According to Air Force officials, these reductions were not made. In accordance with restrictions in the Conference Reports on the 1998 Department of Defense Appropriations Act and the National Defense Authorization Act for Fiscal Year 1998, these reductions were not taken. Specifically, the reports recommended that the Air National Guard and the Air Force Reserve C-130 aircraft remain at current levels—levels before the MSP. At the time of our review, Air Force officials told us that the Air Force was in the process of designing a plan for retiring excess C-130s.

## Is the Air Force Process for Retiring C-130 Aircraft When Replacement Aircraft Become Available Effective?

Although the Air Force has a process governing the retirement of its aircraft, it has not been able to implement the process effectively. As a result, some C-130 aircraft have been retired with substantial service life remaining and/or shortly after the aircraft had been modified. The Air Force, however, appears to be making changes to improve this process.

<sup>9</sup>Congress directed DOD in fiscal year 1991 to assess, among other things, its intratheater lift requirements and develop an integrated plan to meet them. This report, according to Joint Staff officials, addressed this directive.

<sup>10</sup>In September 1994, Congress requested this plan and asked that it include the active duty and reserve components C-130 units and be based on the National Military Strategy and current contingency plans of the JCS.

<sup>11</sup>To determine additional C-130 requirements for worldwide contingencies unrelated to these scenarios, the Joint Staff surveyed the theater commanders. Even with their additional requirement, the C-130 combat delivery fleet still exceeded the number needed for intratheater lift.

Air Force Instruction 16-402<sup>12</sup> governs the process for retiring aircraft. The process begins with a document called the Force Structure Plan Outlook. This document tells the commands how many aircraft are excess to requirements in a given year, usually as a result of budget constraints or a change in requirements for the fleet. Once a decision has been made to excess a certain number of aircraft, the commands are to review:

- (1) The aircraft's remaining service life.
- (2) The recent maintenance history on the aircraft. Program depot maintenance and other inspection records are reviewed, at this point, to assess whether the aircraft had a lot of corrosion problems, maintenance troubles, and/or a known history of performance problems.

When a decision to excess a specific aircraft is finalized, Air Force headquarters is to determine whether other users—that is, active duty, guard and reserves, and ultimately other agencies—could use the aircraft. If other users were not identified, the aircraft should be retired.

The Air Force has retired C-130s with service life remaining on the aircraft. Program officials told us that such retirements have generally been driven by congressional direction to buy more C-130s than the Air Force requested in its annual budget requests. Program officials told us that, accordingly, it was difficult to control the retirement of C-130 aircraft. They stated that, since retirement from the fleet had been based on congressionally directed acquisitions replacing existing C-130 aircraft, they were not retiring aircraft because the service life had expired. Of the 49 C-130s retired between June 1991 and May 1997, 36 were C-130Bs with old technology and 13 were newer C-130Es. Of the 13 C-130Es, all had an average of 14 years of service life still remaining.

In addition, annual congressional appropriation language states that, with the exception of safety modifications, no modifications may be done if the service plans to retire an aircraft in less than 5 years after modifications. We noted that of the 49 C-130 aircraft the Air Force has retired since 1991, 40 had modifications<sup>13</sup> within 5 years of retirement, totaling about \$9 million. Program officials told us that it is difficult to control modifications of C-130 aircraft because the Air Force does not generally know 5 years in advance when a C-130 aircraft will leave the fleet.

<sup>12</sup>Aerospace Vehicle Assignment, Distribution, Accounting, and Termination, dated April 26, 1994.

<sup>13</sup>Safety modifications are not included in this amount.

The Air Force appears to be taking steps to improve its C-130 modifications and retirement process. Specifically, in October 1997, the Vice Chief of Staff, in a message to the lead Air Force commands for C-130 aircraft, stated that additional C-130J congressional adds should be expected for fiscal year 1998 and beyond and that the commands should plan and program accordingly. Air Force officials have stated that they will incorporate this direction in the development of their C-130 retirement plan. In that regard, an AMC Tiger Team looking at the C-130 fleet has recommended to the Air Force Chief of Staff that 150 C-130Es with the worst service life problems be replaced with C-130J-30s. We were told, however, that final decisions were not expected on the retirement of the old C-130s and procurement of the Js until late fall 1998. Until these decisions are made and the plan released, it is too early to determine how well this directive will be implemented.

## What Is the Air Force C-130J Requirement and What Other Alternatives Were Reviewed?

As of March 1998, the Air Force had not decided how many C-130Js will be required. According to C-130 program officials, although the Air Force has a documented requirement for the C-130J as the need arises, a large-scale C-130J program is not needed at this time because the service life of the first C-130E will not expire until 2002. Accordingly, the Air Force has only been requesting one or two C-130Js per year since 1996 for the active force.<sup>14</sup> As previously shown in figure 1, the remaining J acquisitions were congressionally directed buys for the Guard and Reserve.

The Air Force began procuring the J in accordance with directions from the Air Force Chief of Staff to use fiscal year 1994 Guard and Reserve procurement funds to buy two C-130Js. Originally, the two J models were going to the active duty Air Force, which provided the Air National Guard two C-130Hs as a swap. These two J models will now be going to the Air Force Reserves at Keesler Air Force Base, Mississippi, following the flight test program.

The justification for the new C-130J buys, according to requirements, acquisition, and budget documents, is to reduce the cost of ownership of the C-130E and H fleet, with anticipated cost savings associated with the new technology and the reduced crew and maintenance needs of the J aircraft. A review of the C-130J program office's life-cycle cost estimate was completed in June 1996 by the Air Force Cost Analysis Improvement Group. The report stated that operations and support savings are forecast

<sup>14</sup>According to current Air Force basing plans, however, all C-130Js on contract are now scheduled to go to Guard and Reserve bases.

from a program of 135 C-130Js bought over the 1996 to 2014 time frame with the new technology and the reduced crew and maintenance needs of the J aircraft.<sup>15</sup> Air Force officials, however, acknowledge that savings associated with this commercial buy will not be substantiated until several years after delivery/transfer of ownership is taken by the Air Force, which, as previously stated, is now expected in October 1998 for the first J aircraft.

Additionally, during our review, some Air Force officials expressed concern that the normal requirements process was not followed in the recent J buys. They stated that requirement documents for the EC-130Js and WC-130Js were written after the Air Force had made a commitment to buy the aircraft. For example, Congress appropriated funds for two unrequested EC-130Js—one in fiscal year 1997 and one in fiscal year 1998. An October 7, 1997, memorandum from the Office of the Secretary of the Air Force for Acquisition noted, however, that a validated operational requirements document had not yet been generated. Additionally, these officials noted that there have been concerns that the EC-130J buy may not address all of the problems in the current EC-130 fleet—primarily, the lack of adequate space on the aircraft. There are 12 crew stations aboard the EC-130 aircraft and we were told that there is barely enough room for the broadcasting equipment needed for each station. The Air Force has looked at the wide body Boeing 757 as a replacement for the current EC-130 fleet, but has since decided to use the J.

Regarding alternatives to the J, we were told that alternatives have been evaluated and rejected in the past. Specifically, in December 1996, an unsolicited proposal was submitted to modernize the C-130 fleet. Appendix V summarizes the Air Force's reasons for rejecting this proposal. In addition to rejecting prior alternatives to the J for cost and technical reasons, Air Force officials told us that the alternatives were premature since the first C-130E is not scheduled to retire until 2002. Air Force officials also told us that the Air Force is currently considering alternatives presented by an AMC tiger team. Among other things, the goals of the AMC effort included developing an integrated plan to improve reliability and maintainability of the fleet, produce greater commonality in the fleet, and provide an overall acquisition strategy for the C-130 weapon system.

After review of specific problems in the C-130 fleet, which included the inability of the fleet to meet Global Air Traffic Management requirements

<sup>15</sup>This amount includes the 1994 H/J swap C-130Js also. The cost estimate includes the cost to maintain the 135 Js from fiscal year 1997 through fiscal year 2041.

and structural/corrosion problems of the aging fleet, the tiger team recommended that the Air Force (1) modify 360 of the “best structural” C-130s with a block modification process that would essentially put a new front end, including a new engine and cockpit, on the older C-130 aircraft<sup>16</sup> and (2) replace aircraft with the worst service life/structural/corrosion problems—about 150 in this category—with new C-130J-30s. Final decisions on both matters, however, are not expected until the fall of 1998.

### What Is the C-130J Logistics Support Funding Shortfall?

Air Force C-130 officials stated that funding shortfalls for the C-130 fleet have historically been a problem, primarily because Congress has added C-130 aircraft to their budget without providing the needed funding for logistics support. This support includes spare parts, training, and maintenance that is normally provided with a weapon system. These officials further stated that the Air Force was able to deal with the shortfalls in the past because a large logistics support infrastructure was in place for the C-130E and C-130H models, which helped them to absorb the shortfalls. However, they noted that because the C-130J is so different from those prior models, the majority of the support in the current infrastructure cannot be used for the J aircraft.

Additionally, these officials noted that the Air Force, with its constrained budgets and various weapon system priorities, has not budgeted for these funding shortfalls. According to these officials, without the needed support funding, it is possible that some C-130J aircraft may have to be cannibalized to support others in the fleet or the unsupported C-130Js may have to be parked on the ramp at some locations.

The latest Air Force funding shortfall document reported a cumulative logistics support shortfall through fiscal year 2003 of \$302.11 million for the 23 C-130J aircraft on contract through 1998, the 1 requested in 1999, and the 2 that are expected to be bought in 2002 and 2003. Table 2 presents the annual and cumulative logistic support funding shortfalls associated with the C-130J program as of January 7, 1998.<sup>17</sup>

<sup>16</sup>According to Air Force officials, this modified block process, which will result in a configuration referred to as a C-130X, entails a number of extensive modifications done at one time. This will bring the fleet up to date technologically and provide commonality within the fleet.

<sup>17</sup>The amounts associated with the funding shortfall varied a number of times, during our review, because items to be purchased and/or the funding assumed to be available changed. Air Force officials said estimates for the funding shortfall will continue to vary as long as uncertainties, such as annual congressionally directed acquisitions and related decisions on basing, exist.

**Table 2: Air Force C-130J Shortfall**

Dollars in millions

Budget year	1994	1996	1997	1998	1999	2000	2001	2002	2003
Aircraft quantity	2	5	9	7	1	0	0	2	2
Annual shortfall	0	0	\$-11	\$-69	\$-5	\$-70	\$-65	\$-55	\$-27
Cumulative shortfall	0	0	\$-11	\$-80	\$-85	\$-155	\$-220	\$-275	\$-302

Source: C-130J Program Office (as of Jan. 7, 1998).

C-130J program officials told us that the lack of commonality of the J with the existing fleet is causing the Air Force to fund the following.

- Interim Contractor Support (ICS). This includes not only the typical ICS costs such as on-site contractor personnel, technical data, and repair of reparable, but also a commercial supply support system. This support system is needed because, unlike the previous C-130 models, the Air Force does not yet have a database to determine the mean time between failure rates of the C-130J spares. As a result, the correct amount of spares to maintain the fleet's mission capable rate is not known. Hence, provisioning for the C-130J will be contracted out with this contractor support supply system.
- C-130J training systems (simulators) and the associated costs of training flight and maintenance crews. Current plans are to buy five flight simulators for pilot training, a maintenance trainer, and a loadmaster trainer.
- C-130J peculiar support equipment. This is the support equipment peculiar to the J and includes new or modified support equipment like testers, and special tools needed to test, remove, replace, or handle the C-130J unique items on the aircraft.

Air Force officials stated that the J's funding problems are further exacerbated because the aircraft are being assigned to several different bases rather than a single base. Specifically, the 23 Air Force C-130Js on contract are assigned as follows: 9 WC-130Js and 4 combat delivery Js will be located at Keesler Air Force Base, Mississippi; 2 EC-130Js will be located at the Air National Guard unit in Harrisburg, Pennsylvania; and 8 combat delivery C-130Js will be located at the Air National Guard unit in Baltimore, Maryland. These different base assignments result in redundant logistical support such as maintenance and training costs at each base.

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Additionally, there has been much discussion between the Air Force and the Director of Operational Test and Evaluation (DOT&E) regarding the scope of Live Fire Test (LFT) for the C-130J program. An agreement was reached in March 1998, between the two and will be reflected in the C-130J Test and Evaluation Master Plan and appropriate live fire test plans. While there is currently a funding shortfall associated with the LFT program, the Air Force has agreed to fund about \$5.5 million for the following tests: (1) the wing dry bay, (2) the composite propeller, (3) engine fire suppression (combat and non-combat), (4) the vulnerability analysis, and (5) the engine blade containment. DOT&E will fund the hydrodynamic ram testing and the mission abort assessment, which will be about \$2.2 million.

Air Force and contractor officials have been working to remedy the C-130J shortfall with such efforts as commercial supply support system, also called shared logistics. Shared logistics places high-cost, low-use support equipment at a centralized location, rather than at each base, while high usage and special mission spares are placed at each of the bases where the C-130J will be located. Air Force officials said that, according to data provided by Lockheed Martin, costs for spares would total about \$20 million per base for a new aircraft like the C-130J if each C-130J base was provided a full complement of spare parts. Under the shared logistics concept, only \$4 million would be required for each C-130J base compared with the previously stated \$20 million. Savings from this concept have already been incorporated into the Air Force's budget plan. Although no location has been selected for the centralized site, several have been suggested, including options for putting the centralized location where most of the planes will be based or at a location with access to overnight delivery services to facilitate just-in-time deliveries.

In addition to the shared logistics savings, Congress has provided about \$24 million in the fiscal year 1998 budget to help fund C-130J support shortfalls.

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## Agency Comments

DOD concurred with our report. DOD provided technical suggestions for clarification and we have incorporated these suggestions in the text of the report, where appropriate. The DOD comments are reprinted in appendix VI.

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We are sending copies of this report to appropriate congressional committees and the Secretaries of Defense and the Air Force. We will also provide copies to other interested parties upon request.

Please contact me at (202) 512-4841, if you or your staff have any questions concerning this report. Major contributors to this report are listed in appendix VII.

Sincerely yours,

A handwritten signature in cursive script that reads "Louis J. Rodrigues". The signature is written in black ink and is positioned centrally on the page.

Louis J. Rodrigues  
Director, Defense Acquisitions Issues

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**Abbreviations**

ABCCC	Airborne Battlefield Command and Control Center
ACC	Air Combat Command
AMC	Air Mobility Command
DOD	Department of Defense
DOT&E	Director of Operational Test and Evaluation
FAA	Federal Aviation Administration
ICS	Interim Contractor Support
JCS	Joint Chiefs of Staff
LFT	Live Fire Test
MSP	Master Stationing Plan
NSF	National Science Foundation

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# C-130J Hercules Cargo Aircraft

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The C-130J Hercules is the next generation medium-range tactical cargo and personnel aircraft that will be introduced into the existing C-130 fleet of Es and Hs. It is intended to replace aging C-130E/Hs as they approach the end of their service life. Even though the C-130 fleet has been known as the “workhorse” for the active duty Air Force, the Air National Guard, and the Air Force Reserve, the Navy and other governments use the airplanes as well.

Development of the C-130J consists of the state-of-the-art technology, according to Lockheed Martin—the contractor for the “J”—and will reduce manpower requirements, operating costs, and life-cycle costs. Although the C-130J essentially has the same structural characteristics as previous models, there are some significant differences. These include the advanced two-pilot flight station with fully integrated digital avionics system with color multi-functional liquid crystal displays and head-up displays; navigation systems with dual embedded Global Positioning Systems, mission planning system, low-power color radar, digital map display, and new digital autopilot; simplified fuel system with provisions for adding a receiver aerial refueling probe or tanker aerial refueling pods; an extensive built-in test integrated diagnostics with an advisory, caution, and warning system; and higher power turboprop engines with more efficient, six-bladed all composite propellers.

According to Lockheed Martin, the above enhancements will enable the airplane to climb higher and faster, fly farther at a higher cruise speed, and take off and land in a shorter distance than the existing C-130 fleet. Table I.1 presents the contractor’s comparison of the J and J-30 capabilities with those of previous models and figure I.1 shows a C-130J-30 model.

Appendix I  
C-130J Hercules Cargo Aircraft

**Table I.1: Contractor Comparison of C-130E/H/J/J-30 Performance Capabilities and Capacity Characteristics**

<b>Some capabilities and/or capacities</b>	<b>C-130E</b>	<b>C-130H</b>	<b>C-130J</b>	<b>C-130J-30</b>
Maximum payload (pounds)	39,000	39,000	41,700	39,300
Maximum payload range (nautical miles)	1,860	1,745	2,450	2,450
Maximum effort take off roll (feet)	3,300	3,000	1,950	1,950
Cruise speed (knots)	280	300	340	340
Paratroops capacity	64	64	64	92
Troop seats	92	92	92	128
Cargo floor length (feet)	40	40	40	55
Litters	74	74	74	97
Airdrop 463L pallets	5	5	5	7
Container delivery system bundles	16	16	16	24
Runway length/width/taxiway (feet)	3,000/60/45	3,000/60/45	3,000/60/45	3,000/60/45
All weather aerial delivery	Partial	Partial	Yes	Yes

Source: Lockheed Martin Corporation.

Figure I.1 is a picture of the C-130J-30 aircraft.

Figure I.1: C-130J-30



Source: Lockheed Martin Corporation.

## Scope and Methodology

To accomplish our objectives, we interviewed a number of officials within the Office of the Secretary of Defense; the Joint Chiefs of Staff; the Office of the Secretary of the Air Force; the Air Mobility Command, Scott Air Force Base, Illinois; the Air Combat Command, Langley Air Force Base, Virginia; the Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio; the Air Education and Training Center, Little Rock Air Force Base, Arkansas; Air National Guard Headquarters, Washington, D.C.; Air National Guard Readiness Center, Andrews Air Force Base, Maryland; Air National Guard, Harrisburg, Pennsylvania; the Air Force Reserve Command, Robins Air Force Base, Georgia; the Warner-Robins Air Logistics Center, Robins Air Force Base, Georgia; Air Force Reserve Components in Baltimore and Minneapolis; Lockheed Martin, Arlington, Virginia; Air Force Audit Agency; the National Science Foundation, Virginia; and the Defense Contract Management Command, Marietta, Georgia.

To ascertain the mission of the current and planned C-130 fleet, we reviewed the Air Combat Command's C-130 Total Force Plan Briefing, C-130 Combat Delivery Mission Area Plan, and Combat Air Forces Concept of Operations for Theater Airlift; the Air Mobility Command's 1998 Air Mobility Master Plan; Operational Requirements Documents for the various C-130 model designs; the Joint Chiefs of Staffs Intratheater Lift Analysis; the Air Force C-130 Master Stationing Plan; prior and current C-130 Selected Acquisition Reports; and Air Force headquarters' written responses in this area.

To obtain the Air National Guard and Air Force Reserve C-130 requirement—including current and planned inventory and the C-130 procurement history for these units, we obtained such information from the headquarters Air National Guard, Washington, D.C.; the Air Force Reserve Command, Robins Air Force Base, Georgia; and the Air Logistics Center, Warner-Robins Air Force Base, Macon, Georgia.

To ascertain the Air Force plans for retiring C-130s identified as excess aircraft in the C-130 Master Stationing Plan, we reviewed the Final C-130 Master Stationing Plan, and Public Law 103-335, section 8125, which requires the plan. In addition, we obtained written responses from Air Force headquarters, Air National Guard, Air Force Reserves headquarters, and the Air Mobility Command on this matter.

To determine the effectiveness of the Air Force's system for retiring old aircraft when new C-130s enter the fleet, we reviewed listings of

modifications in the C-130 System Program Offices' Time Compliance Technical Orders that were done to C-130B and E models retired since 1978, and applicable laws and regulations regarding modifying and retiring aircraft. We also obtained views from C-130 program officials on how retirement of the fleet was done in the past and how they expect it will be done in the future.

To determine the Air Force requirement/justification for the C-130J aircraft and whether or not alternatives to buying the new J model were considered, we reviewed the C-130J Operational Requirement Document; the Single Acquisition Management Plan and other applicable program documentation; Senate Report 104-267, which required the Secretary of Defense to report by March 1997 on the benefits of remanufacturing the C-130 fleet and the Under Secretary of Defense for Acquisition and Technology's April 29, 1997, letter to congressional defense committees on this subject; Wright-Patterson Air Force Base's assessment of an unsolicited proposal to remanufacture the C-130 fleet; and data provided by Air Force headquarters regarding the requirement for the program. We also toured the C-130J-30 on display at Ronald Reagan National Airport.

To ascertain the Air Force logistic support funding needs for the C-130J aircraft, we reviewed the October 1995 and November 1996 C-130J contracts and applicable documentation for subsequent options that were exercised, and the quarterly C-130J Defense Acquisition Executive Summary Report for the C-130J program. We also obtained views, perspectives, and supporting documentation from officials at Air Force headquarters, Air Combat Command, Air Mobility Command, and the C-130J System Program Office at Wright-Patterson Air Force Base regarding the reasons for the funding shortfalls and initiatives/efforts to reduce the shortfalls.

We conducted this review from January 1997 to March 1998 in accordance with generally accepted government auditing standards.

# Detailed Mission Descriptions for C-130 Models

---

**C-130 model:** C-130E and H Hercules (Combat delivery models)

**Commands:** Air Mobility Command, Air Combat Command, Air Force Reserve, Air Education and Training, Air National Guard, and Air Force Special Operations Command

**Mission:**

The C-130 Hercules combat delivery models perform the intratheater portion of the airlift mission. Their primary mission is to provide rapid transportation of personnel or cargo for delivery by parachute to hostile areas, or by landing at rough, dirt strips within those areas. The C-130 E/H models can also be used as tactical transports and can be readily converted for aeromedical evacuation or aerial delivery missions. The C-130 is the primary tactical aeromedical evacuation aircraft. During peacetime, it joins on mercy flights throughout the world, bringing food, clothing, shelter, doctors, nurses, and medical supplies as well as moving victims to safety.

**Special equipment/features:**

The C-130H is generally similar to the E model but has updated turboprops, a redesigned outer wing, updated avionics, and other minor improvements. In its airlift configuration, the C-130E/H can carry up to 92 combat troops with equipment, 64 paratroopers, 74 litter patients, or 6 standard 463-L pallets. It can transport various configurations of rolling stock, including some oversize vehicles.

**C-130 model:** AC-130H Spectre

**Command:** Air Force Special Operations Command

**Mission:**

The AC-130H is a gunship with primary missions of close air support, air interdiction, and armed reconnaissance. Additional missions include perimeter and point defense, escort, landing, drop and extraction zone support, forward air control, limited command and control, and combat search and rescue.

**Special equipment/features:**

These heavily armed aircraft incorporate side-firing weapons integrated with sophisticated sensor, navigation, and fire control systems to provide firepower or area saturation during extended periods, at night, and in

adverse weather. The sensor suite consists of a low light level television sensor and an infrared sensor. Radar and electronic sensors also give the gunship a method of positively identifying friendly ground forces as well as effective ordnance delivery during adverse weather conditions. Navigational devices include an inertial navigation system and global positioning system.

**C-130 model:** AC-130U Spectre Gunship

Command: Air Force Special Operations Command

Mission:

The AC-130U's primary missions are nighttime close air support for special operations and conventional ground forces; air interdiction; armed reconnaissance; air base, perimeter, and point defense; land, water, and heliborne troop escort; drop, landing, and extraction zone support; forward air control; limited airborne command and control; and combat search and rescue support.

Special equipment/features:

The AC-130U has one 25-millimeter Gatling gun, one 40-millimeter cannon, and one 105-millimeter cannon for armament and is the newest addition to the Air Force Special Operations Command's fleet. This heavily armed aircraft incorporates side-firing weapons integrated with sophisticated sensor, navigation, and fire control systems to provide firepower or area saturation at night and in adverse weather. The sensor suite consists of an all light level television system and an infrared detection set. A multi-mode strike radar provides extreme long-range target detection and identification. The fire control system offers a dual target attack capability, whereby two targets up to 1 kilometer apart can be simultaneously engaged by two different sensors, using two different guns. Navigational devices include the inertial navigation system and global positioning system. The aircraft is pressurized, enabling it to fly at higher altitudes and allowing for greater range than the AC-130H. Defensive systems include a countermeasures dispensing system that releases chaff and flares to counter radar infrared guided anti-aircraft missiles. Also infrared heat shields mounted underneath the engines disperse and hide engine heat sources from infrared guided anti-aircraft missiles.

**C-130 model:** EC-130E "Command Solo"

Command: Air National Guard

Mission:

EC-130E Commando Solo, the Air Force's only airborne radio and television broadcast mission, is assigned to the 193rd Special Operations Wing, the only Air National Guard unit assigned to the Air Force Special Operations Command. Commando Solo conducts psychological operations and civil affairs broadcasts. The EC-130E flies during either day or night scenarios and is air refuelable. Commando Solo provides an airborne broadcast platform for virtually any contingency, including state or national disasters or other emergencies. Secondary missions include command and control communications countermeasures and limited intelligence gathering.

Special equipment/features:

Highly specialized modifications include enhanced navigation systems, self-protection equipment, and the capability to broadcast color television on a multitude of worldwide standards.

**C-130 model:** EC-130E Airborne Battlefield Command and Control Center (ABCCC)

Command: Air Combat Command

Mission:

The EC-130E is a modified C-130 "Hercules" aircraft designed to carry the ABCCC capsules. While functioning as an extension of ground-based command and control authorities, the primary mission is providing flexibility in the overall control of tactical air resources. In addition to maintaining control of air operations, ABCCC can provide communications to higher headquarters, including national command authorities, in both peace and wartime environments.

Special equipment/features

These one of a kind aircraft include the addition of external antennae to accommodate the vast number of radios in the capsule, heat exchanger pods for additional air conditioning, an aerial refueling system, and special mounted rails for uploading and downloading the capsule. The ABCCC system is a high-tech automated airborne command and control facility featuring computer generated color displays, digitally controlled

communications, and rapid data retrieval. The platform's 23 fully securable radios, secure teletype, and 15 automatic fully computerized consoles, allow the battlestaff to analyze current combat situations and direct offensive air support.

**C-130 model:** EC-130H "Compass Call"

Commands: Air Combat Command and Air Force Materiel Command

Mission:

Compass Call is the designation for a modified version of the C-130 "Hercules" aircraft configured to perform tactical command, control, and communications countermeasures. Specifically, the aircraft uses noise jamming to prevent communication or the transfer of information essential to command and control of weapon systems and other resources. It primarily supports tactical air operations but also can provide jamming support to ground force operations.

Special equipment/features

Modifications to the aircraft include an electronic countermeasures system (Rivet Fire), air refueling capability, and associated navigation and communications systems. Rivet Fire demonstrated its effect on enemy command and control networks in Panama and Iraq.

**C-130 model:** HC-130

Commands: Air Combat Command, Air Force Reserve, and Air National Guard

Mission:

The HC-130H/N's mission is search and rescue. The HC-130P does aerial refueling of combat search and rescue helicopters and deployment of para-rescuemen. The HC-130P deploys worldwide to provide combat search and rescue coverage for U.S. and allied forces. Combat search and rescue missions include flying low-level, preferably at night aided with night vision goggles, to an area where aerial refueling of a rescue helicopter is performed or para-rescuemen are deployed. The secondary mission of the HC-130P is peacetime search and rescue. HC-130P aircraft and crews are trained and equipped for search and rescue in all types of terrain, including arctic, mountain, and maritime. Peacetime search and

rescue missions may include searching for downed or missing aircraft, sinking or missing water vessels, or missing persons. The HC-130P can deploy para-rescuemen to a survivor, escort helicopters to a survivor, or airdrop survival equipment.

Special equipment/features:

H/N aircraft are equipped with an advanced avionics package. Improvements are being made to the HC-130P to provide improved navigation, enhanced communications, better threat detection, and more effective countermeasures systems. When fully modified, the HC-130P will have a self-contained navigation system, including an inertial system and global positioning system. It will also have a missile warning system, radar warning receiver, and associated chaff and flare dispenser systems.

C-130 model: LC-130H

Command: Air National Guard

Mission:

The primary mission of this model is Arctic support. Two specific missions are support of (1) the National Science Foundation in Antarctica and (2) assorted national and international scientific activities in Greenland. (The Navy also operates seven LC-130 aircraft in Antarctica. These aircraft move large amounts of cargo, personnel, and fuel throughout the continent.)

Special equipment/features:

LC-130s are specially equipped with landing gear wheel/ski modification for operation in Arctic regions.

C-130 model: MC-130E Combat Talon I and MC-130H Combat Talon II

Commands: Air Force Special Operations Command, Air Force Reserve, and Air Education and Training Command

Mission:

The mission of the Combat Talon I/II is to provide global, day, night, and adverse weather capability to airdrop and airland personnel and equipment in support of U.S. and allied special operations forces. The MC-130E also has a deep penetrating helicopter refueling role during special operations missions.

Special equipment/features:

These aircraft are equipped with in-flight refueling equipment, terrain-following, terrain-avoidance radar, an inertial and global positioning satellite navigation system, and a high-speed aerial delivery system. The special navigation and aerial delivery systems are used to locate small drop zones and deliver people or equipment with greater accuracy and at higher speeds than possible with a standard C-130. The aircraft is able to penetrate hostile airspace at low altitudes and crews are specially trained in night and adverse weather operations. Nine of the MC-130Es are equipped with surface-to-air Fulton air recovery system, a safe, rapid method of recovering personnel or equipment from either land or water. It involves use of a large, helium-filled balloon used to raise a 450-foot nylon lift line. The MC-130E flies toward the lift line and snags it with scissors-like arms located on the aircraft nose. The person or equipment is lifted off, experiencing less shock than that caused by a parachute opening. Aircrew members then use a hydraulic winch to pull the person or equipment aboard through the open rear cargo door. The MC-130H features highly automated controls and displays to reduce crew size and workload.

C-130 model: MC-130P Combat Shadow

Commands: Air Force Special Operations Command, Air Education and Training Command, and Air Force Reserve

Mission:

The MC-130P Combat Shadow flies clandestine or low visibility, low-level missions into politically sensitive or hostile territory to provide air refueling for special operations helicopters. The MC-130P primarily flies its single- or multi-ship missions at night to reduce detection and intercept by airborne threats. Secondary mission capabilities include airdrop of small special operations teams, small bundles, and rubber raiding craft; night-vision goggle takeoffs and landings; tactical airborne radar approaches; and in-flight refueling as a receiver.

Special equipment/features:

When modifications are complete in fiscal year 1999, all MC-130P aircraft will feature improved navigation, communications, threat detection, and countermeasures systems. When fully modified, the Combat Shadow will have a fully integrated inertial navigation and global positioning system, and night-vision goggle-compatible interior and exterior lighting. It will

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**Appendix III**  
**Detailed Mission Descriptions for C-130**  
**Models**

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also have a forward-looking infrared radar, missile and radar warning receivers, chaff and flare dispensers, and night-vision goggle-compatible heads-up display. In addition, it will have satellite and data burst communications, as well as in-flight refueling capability as a receiver. The Combat Shadow can fly in the day against a reduced threat; however, crews normally fly night, low-level, air refueling and formation operations using night-vision goggles.

**C-130 model:** NC-130A, E, H

Command: Air Force Materiel Command

Mission:  
Test aircraft.

**C-130 model:** WC-130H

Command: Air Force Reserve

Mission:  
The WC-130 Hercules is a high-wing, medium-range aircraft used for weather reconnaissance missions. It is a modified version of the C-130 configured with computerized weather instrumentation for penetration of severe storms to obtain data on storm movements, dimensions, and intensity. The WC-130 is flown exclusively from Keesler Air Force Base by Air Force Reserve organizations known as the Hurricane Hunters. The hurricane reconnaissance area includes the Atlantic Ocean, Caribbean Sea, Gulf of Mexico, and central Pacific Ocean areas. The WC-130 is capable of staying aloft nearly 18 hours during missions. It is equipped with two external 1,400 gallon fuel tanks, an internal 1,800 gallon fuel tank, and uprated engines. An average weather reconnaissance mission might last 11 hours and cover almost 3,500 miles while the crew collects and reports weather data.

Special equipment/features:

Weather equipment aboard the aircraft provides a high-density, high accuracy horizontal atmospheric sensing capability. Sensors installed on the aircraft measure outside temperature, humidity, absolute altitude of the aircraft, pressure altitude, wind speed, and direction once per second. This information, along with an evaluation of other meteorological

---

conditions, turbulence, icing, radar returns and visibility, is encoded by the on-board meteorologist and transmitted by satellite to the National Hurricane Center. Special equipment measures the atmosphere vertically by using an expendable instrument, which is dropped from the aircraft. The 16-inch long cylinder is dropped every 400 miles while on a weather track and in the center or eye of a hurricane. A vertical atmospheric profile of pressure, temperature, humidity, barometric pressure, wind speed, and direction is received from the instrument as it descends to the ocean surface, slowed and stabilized by a small parachute. From this information, the system operator analyzes and encodes data for satellite transmission to the National Hurricane Center.

# Air National Guard and Air Force Reserve C-130 Inventory

Table IV.1: Air National Guard C-130 Aircraft (inventory as of January 12, 1998)

Model	Location	Inventory
C-130E	Baltimore, Md.	8
C-130E	Quonset, R.I.	8
C-130E	Channel Island ANG Sta, Calif.	12
C-130E	Reno, Nev.	8
C-130E	Boise, Idaho	4
C-130E	Peoria, Ill.	8
C-130E	Little Rock, Ark.	8
C-130E	Selfridge, Mich.	8
<b>Total C-130E</b>		<b>64</b>
C-130H	Schenectady, N.Y.	4
C-130H	Nashville, Tenn.	12
C-130H	Charleston, W.Va.	8
C-130H	Louisville, Ky.	12
C-130H	Minneapolis/St. Paul, Minn.	8
C-130H	Dallas, Tex.	8
C-130H	Oklahoma City, Okla.	8
C-130H	St. Joseph, Mo.	8
C-130H	Charlotte, N.C.	12
C-130H	Cheyenne, Wyo.	8
C-130H	Savannah, Ga.	8
C-130H	Wilmington, Del.	8
C-130H	Martinsburg, W.Va.	12
C-130H	Kulis, Alaska	8
C-130H	Mansfield Lahm Airport, Ohio	8
C-130H	Hickam, Hawaii	4
C-130H	McEntire, S.C.	1
C-130H	New Orleans, La.	1
<b>Total C-130H</b>		<b>138</b>
<b>Total ANG C-130 Es and Hs</b>		<b>202</b>
EC-130E	Harrisburg, Pa.	5
HC-130H	Kulis, Alaska	2
HC-130N/P	Suffolk, N.Y.	4
HC-130P	Moffet NAS, Calif.	4
LC-130H	Schenectady, N.Y.	7
<b>Total ANG Special Mission C-130s</b>		<b>22</b>
<b>Grand total ANG C-130 Aircraft</b>		<b>224</b>

Source: Developed by GAO using Air National Guard data.

**Appendix IV  
Air National Guard and Air Force Reserve  
C-130 Inventory**

**Table IV.2: Air Force Reserve C-130  
Aircraft (as of January 12, 1998)**

<b>Model</b>	<b>Location</b>	<b>Inventory</b>
C-130E	Portland IAP, Oreg.	0
C-130E	Patrick AFB, Fla.	0
C-130E	Eglin AFB, Fla.	0
C-130E	Minneapolis/St. Paul, Minn.	8
C-130E	Keesler AFB, Miss.	8
C-130E	Willow Grove, Pa.	10
<b>Total C-130E</b>		<b>26</b>
C-130H	Gen. Mitchell IAP, Wis.	10
C-130H	Youngstown, Ohio	16
C-130H	Pittsburgh, Pa.	8
C-130H	Dobbins, Ga.	8
C-130H	Niagara Falls, N.Y.	8
C-130H	Peterson AFB, Colo.	14
C-130H	Maxwell AFB, Ala.	8
<b>Total C-130H</b>		<b>72</b>
<b>Total AFR C-130Es and Hs</b>		<b>98</b>
HC-130N/P	Patrick AFB, Fla.	5
HC-130P	Portland IAP, Oreg.	3
MC-130E	Eglin AFB, Fla.	8
MC-130P	Eglin AFB, Fla.	4
WC-130H	Keesler AFB, Miss.	10
<b>Total AFR Special Mission C-130s</b>		<b>30</b>
<b>Grand total AFR C-130 Aircraft</b>		<b>128</b>

Source: Developed by GAO using Air Force Reserve data.

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# Summary of Air Force Reasons for Rejecting the Unsolicited C-130 Modernization Proposal

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On December 16, 1996, an unsolicited proposal was submitted to the Air Force to modernize the C-130 fleet. The proposal anticipated a 21-month schedule to fabricate prototypes at a firm fixed-price of \$50 million, with projected potential fleet-wide savings of \$6 billion.

The C-130 Program Office review of the unsolicited proposal concluded that, although the proposal was technically feasible, it was impractical due to cost, schedule, and technical risks. The actual evaluation is labeled FOR OFFICIAL USE ONLY, precluding a detailed explanation of those risks in this report. However, generic examples of the risks included:

- aggressive concurrency in program schedule;
- reliance on reverse engineering in lieu of original manufacturer equipment data because of proprietary rights of original manufacturer;
- use of unproven technology;
- inadequate support equipment, manuals, training, and spares for the prototype, and for the test and evaluation effort;
- inadequate software development and integration for an undefined avionics suite, including lack of crew-member workload analysis;
- an additional \$15 million for the test and evaluation effort would be required over the firm fixed-price proposal of \$50 million; and
- insufficient substantiation of the \$6-billion claimed savings.

In recommending nonapproval of the unsolicited proposal, the C-130 Program Office also cited the lack of program requirement, funding, and direction for the proposed C-130 program as additional reasons for rejection. Finally, the Program Office concluded that the proposal was not unique and innovative as prescribed in the Federal Acquisition Regulation for unsolicited proposals. Hence, even if the proposal was acceptable, it would not qualify for an exception to full and open competition.

# Comments From the Department of Defense



ACQUISITION AND TECHNOLOGY

OFFICE OF THE UNDER SECRETARY OF DEFENSE

3000 DEFENSE PENTAGON  
WASHINGTON DC 20301-3000

10 APR 1998

Mr. Louis J. Rodrigues  
Director, Defense Acquisitions Issues  
National Security and International  
Affairs Division  
U. S. General Accounting Office  
Washington, DC 20548

Dear Mr. Rodrigues:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report "INTRATHEATER AIRLIFT: Information on the Air Force's C-130 Aircraft," dated March 24, 1998 (GAO Code 707196), OSD Case 1573. The DoD has reviewed the draft report and concurs without further comment.

Suggested technical changes for clarification have been provided separately.

The Department appreciates the opportunity to comment on the GAO draft report.

Sincerely,

George R. Schneider  
Director  
Strategic and Tactical Systems



---

# Major Contributors to This Report

---

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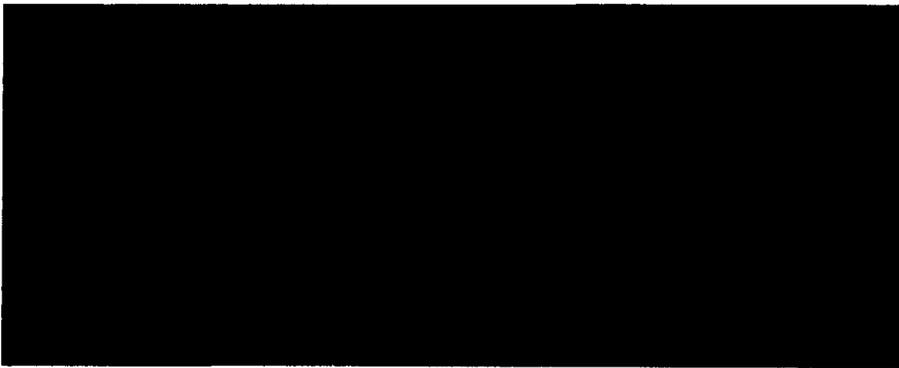
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**Address Correction Requested**

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**MOFFITT, Stephen SRM (1428)**

---

**From:** VanDorn, Will [Will.VanDorn@mail.house.gov]  
**Sent:** Friday, June 10, 2005 3:01 PM  
**To:** MOFFITT, Stephen SRM (1428)  
**Subject:** FW: i don't know why, but i didn't think to add up the number of C-130s earmarked for the Guard/reserves

fyi

---

**From:** Christopher Bolkcom [mailto:CBOLKCOM@crs.loc.gov]  
**Sent:** Friday, June 10, 2005 2:59 PM  
**To:** VanDorn, Will  
**Subject:** i don't know why, but i didn't think to add up the number of C-130s earmarked for the Guard/reserves

i don't know why, but i didn't think to add up the number of C-130s earmarked for the Guard/reserves. the number is 50.

CHRISTOPHER BOLKCOM. Specialist in National Defense. Congressional Research Service. Library of Congress LM-315, Washington, DC 20540-7460. (202) 707-2577

7/1/2005



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

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](mailto: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 cursive script, appearing to read "Mary L. Ugone", is written over the typed name.

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.

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\*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.

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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.

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## 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)

<u>Year</u>	<u>Air Force Reserve</u>	<u>Air National Guard</u>	<u>Marine Corps</u>	<u>Coast Guard</u>	<u>Total</u>
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
<b>Total</b>	<b>14</b>	<b>18</b>	<b>12</b>	<b>6</b>	<b>50</b>

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)

	<u>Category 1</u>	<u>Category 2</u>	<u>Total</u>
Open	33	151	184
Closed	135	532	667
<b>Total</b>	<b>168</b>	<b>683</b>	<b>851</b>

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

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## 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.

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## 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	60	0
<b>Total</b>	<b>117</b>	<b>50</b>

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
<b>Total</b>	<b>32</b>	<b>9,529</b>	<b>4,750</b>	<b>4,779</b>

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
<b>Total</b>	<b>50</b>	<b>\$2,588,695,263</b>	<b>\$22,654,737</b>	<b>\$2,611,350,000</b>

## 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.

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**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

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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 815<sup>th</sup> Air Squadron and the 135<sup>th</sup> 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

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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.

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## **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 withholdings 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

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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.**

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**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

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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 nonconcluded 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.

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## 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.

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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.

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## **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**

**815<sup>th</sup> Air Squadron.** The 815<sup>th</sup> 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 815<sup>th</sup> Air Squadron has received four C-130J aircraft and expected to receive an additional four by 2005. The 815<sup>th</sup> 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.

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

### **Air National Guard**

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

**143<sup>rd</sup> Airlift Squadron.** The Rhode Island Air National Guard 143<sup>rd</sup> Airlift Squadron performs the intratheater portion of the airlift mission and is a platform for dropping troops and equipment into hostile areas. The 143<sup>rd</sup> 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.

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**146<sup>th</sup> Airlift Squadron.** The California Air National Guard 146<sup>th</sup> 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.

**193<sup>rd</sup> Special Operations Wing.** The 193<sup>rd</sup> 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 193<sup>rd</sup> 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.

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## 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 withholds 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

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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.

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## **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

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## **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 1C 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](http://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](http://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](http://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 definition<sup>1</sup>, but for --

\* \* \*

<sup>1</sup> 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 1C 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

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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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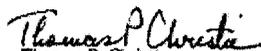
APR 15 2004

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 Sukell, (703 695-9085), or Matt Keough (703 693-7780).

  
Thomas P. Christie  
Director

cc:  
USD(AT&L)

## **Team Members**

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

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109TH CONGRESS }  
1st Session

SENATE

{ REPORT  
109-69

**NATIONAL DEFENSE AUTHORIZATION  
ACT FOR FISCAL YEAR 2006**

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**R E P O R T**

[TO ACCOMPANY S. 1042]

ON

AUTHORIZING APPROPRIATIONS FOR FISCAL YEAR 2006 FOR MILITARY ACTIVITIES OF THE DEPARTMENT OF DEFENSE, FOR MILITARY CONSTRUCTION, AND FOR DEFENSE ACTIVITIES OF THE DEPARTMENT OF ENERGY, TO PRESCRIBE PERSONNEL STRENGTHS FOR SUCH FISCAL YEAR FOR THE ARMED FORCES, AND FOR OTHER PURPOSES

**COMMITTEE ON ARMED SERVICES  
UNITED STATES SENATE**



MAY 17, 2005.—Ordered to be printed

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aircraft. The F-15E is a dual-role fighter designed to perform air-to-air and air-to-ground missions. The procurement of F-15E attrition reserve aircraft is included on the Air Force Chief of Staff's unfunded priorities list. The committee recommends an increase of \$65.0 million in APAF for the procurement of F-15E aircraft.

#### **C-130J/KC-130 multiyear procurement restoration**

The budget request included \$99.0 million in Aircraft Procurement, Air Force (APAF), but included no funding to procure C-130J tactical airlift aircraft and no funding for advance procurement. The budget request included \$1,092.7 million in Aircraft Procurement, Navy (APN), for the procurement of 12 KC-130J aerial refueling aircraft, but included no funding for advance procurement. The budget request would terminate the C-130J multiyear procurement (MYP) contract that was authorized by the Bob Stump National Defense Authorization Act for Fiscal Year 2003 (Public Law 107-314). In a May 10, 2005, letter to the Chairman of the Committee on Armed Services of the Senate, the Secretary of Defense indicated his intent to reverse his decision to terminate the C-130J multiyear contract because of contract termination costs. Additionally, the Secretary informed the Chairman in this letter that a budget amendment for fiscal year 2006 would not be required to accomplish this goal.

The committee does not agree that a budget amendment is not necessary. Since there is no new information from the Department of Defense on the funding profile and numbers of aircraft by variant for C-130Js in fiscal year 2006, the committee exercised its discretion concerning the proper mix of these aircraft. The committee recommends an increase of \$645.0 million in APAF for the procurement of nine C-130J tactical airlift aircraft, and \$90.0 million in APAF for C-130J advance procurement. The committee also recommends a decrease of \$781.0 million in APN, leaving sufficient funds for the procurement of four KC-130J aerial refueling aircraft, and an increase of \$46.0 million in APN for KC-130J advance procurement.

#### **B-1 digital communication improvements**

The budget request included \$13.5 million in Aircraft Procurement, Air Force (APAF), for post production support to the B-1 aircraft and \$132.5 million in PE 64226F for B-1 capability improvements, but included no funding for the procurement and installation of the B-1 digital communication improvement. The B-1 digital communication improvement program preserves critical combat capability by providing Demand Assigned Multiple Access (DAMA)-compliant satellite data access for responsive in-flight mission and target changes. The existing temporary Combat Track II (CTII) radios are not DAMA compliant and will lose satellite access after fiscal year 2007. Procurement of the B-1 digital communication improvement is included on the Air Force Chief of Staff's unfunded priorities list. The committee recommends an increase of \$18.0 million in APAF and an increase of \$8.0 million in PE 64226F for the procurement and installation of the B-1 digital communication im-

#### **C-5 aircraft avionics modernization**

The budget request included \$71.1 million, Air Force (APAF), for modification, including \$69.3 million to continue the program (AMP). AMP upgrades the communications, navigation and safety/air traffic control and replaces unreliable cockpit avionics. In the AMP program, the committee recommends an increase of \$71.1 million in APAF for C-5 AMP.

#### **C-130E/H aircraft modifications**

The budget request included \$185.7 million, Air Force (APAF), for the modifications to the C-130, including \$50.6 million for the Avionics Modernization Program (AMP) for the procurement and installation of the Cockpit Warning Box (CWB) with expired service life.

The AMP provides full Global Air Traffic Control (GATC) compliant aircraft. The committee recommends an increase of \$12.0 million in APAF for the procurement of C-130E/H aircraft.

The CWB replacement increases the number of C-130 aircraft. The Air Force has recently removed from service CWBs whose service life has expired. The committee recommends an increase of \$12.0 million in APAF for the procurement of CWBs for C-130E/H aircraft. The committee also recommends an increase of \$235.4 million in APAF for the procurement of C-130E/H aircraft.

#### **KC-135 global air traffic management**

The budget request included \$88.8 million, Air Force (APAF), for modifications to KC-135 aircraft, including \$77.7 million for Air Traffic Management (GATM) modifications. The modification includes avionics upgrades, and the procurement of ground support equipment and surveillance equipment needed for the KC-135 aircraft. To accelerate this program, the committee recommends an increase of \$10.0 million in APAF for the procurement of KC-135 GATM modifications.

#### **E-8C joint surveillance and targeting reengining**

The budget request included \$15.5 million, Air Force (APAF), for the procurement of E-8C aircraft, but included no funding for the procurement of E-8C aircraft.

The reengining of the E-8C would increase the reliability and performance of the E-8C aircraft and also reduce total life cycle costs. The procurement of E-8C aircraft is included on the Air Force Chief of Staff's unfunded priorities list. The committee recommends an increase of \$15.5 million in APAF for the procurement of E-8C aircraft.





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June 24, 2005 Friday  
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**SECTION:** NEWS; Pg. A1

**LENGTH:** 665 words

**HEADLINE:** FALLS BASE WAS LATE CHOICE FOR CLOSURE;  
GENERAL CITES DECISION TO **SHIFT CARGO** PLANES

**BYLINE:** By Jerry Zremski - NEWS WASHINGTON BUREAU

**BODY:**

The Niagara Falls Air Reserve Station was one of the last facilities added to the Air Force's base-closure list, and it happened only after top officers decided to move **cargo** planes away from the Reserve to an expanding active-duty base in Kansas, an Air Force general said Thursday.

"Niagara and Gen. Mitchell (an air station in Milwaukee) were among the last added to the list," Maj. Gen. Gary W. Heckman, co-chairman of the Air Force panel that drew up the closure recommendations, said in an interview.

The Air Force had a goal of giving more C-130 **cargo** planes to active-duty forces, which prompted the plan to move the planes from Niagara Falls, Heckman said.

"We had to go back and make some adjustments to fit the correct mix," Heckman said.

This meant that the Niagara base was added to the base-closure list in January after previously being slated for expansion.

Now it will be up to an independent commission to decide whether the Air Force deviated from standards that Congress set for base closures.

Military value is supposed to be the key criterion in such decisions. That being the case, supporters of the Niagara base have long argued that a simple desire to expand the active-duty C-130 fleet is not enough to justify closing the base.

Citing the Niagara base's strong recruiting record and its units' strong performance in the Iraq War, Rep. Thomas M. Reynolds, R-Clarence, said the Air Force was more concerned with boosting its active-duty forces than sticking with the base-closure criteria.

"They made an ill-advised decision at the expense of the Reserves and at the expense of homeland security," Reynolds said.

Heckman made his comments after the Air Force released its "Third Look" plan for redrawing the nation's fleet of C-130 **cargo** planes.

Drawn up last November, that Third Look -- which had been missing from the Pentagon's public records -- showed just what the first two drafts of the base-closure plan had shown: a doubling of the C-130 fleet in Niagara, from eight planes to 16.

All that changed when Air Force officials looked at the number of **cargo** planes assigned to active-duty forces, the Reserve and the National Guard.

To solve that problem, Air Force officials went back to their list of bases ranked by a "mission compatibility index" and decided to close the Niagara and Milwaukee facilities, Heckman said. Those closures were listed in the Air Force's Fourth and Final Look plans for the C-130 fleet, which were drawn up in January.

Eight C-130s in Niagara currently are assigned to the 914th Airlift Wing, a Reserve unit that would see its duties split among bases in Virginia, Colorado and Texas. The unit's planes would go to Little Rock Air Force Base in Arkansas, which would become the hub of the C-130 fleet, with 116 such planes based there.

The Air Force argues that the consolidation can trim maintenance costs for a fleet of **cargo** planes that is aging and in need of frequent repairs. The Pentagon released that Third Look plan for its C-130s at the request of Sen. Hillary Rodham Clinton, D-N.Y.

Heckman said the plan had been withheld because part of it was classified, but Reynolds said he could not find it in the reading room set up for members of Congress, which includes access to classified materials.

Since the Air Force owns the Niagara base, its Reserve unit there, rather than its National Guard unit, is seen as the driving force behind the plan to close the facility. The Air National Guard's 107th Air Refueling Wing would also close under the plan, with its planes and crews moving to a base in Bangor, Maine.

The Base Realignment and Closure Commission will hold a hearing from 1 to 5 p.m. Monday in the Center for the Arts on the University at Buffalo's North Campus in Amherst. The deadline for its revised plan is Sept. 8.

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**LOAD-DATE:** June 26, 2005

**Document 1 of 125.** [next](#) ▶▶

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