

**SIGAR**Office of the Special Inspector General  
for Afghanistan Reconstruction

October 6, 2014

The Honorable Chuck Hagel  
Secretary of Defense

Dear Secretary Hagel:

Thank you for your department's response to my concerns regarding the planned provision of the C-130H cargo planes to the Afghan Air Force (AAF). In my July 10, 2014, letter, I questioned the need for two additional C-130Hs when the AAF, based on the information we received, were underutilizing the two it already had in the inventory. Consequently, I requested that the Department of Defense (DOD) review the AAF's medium-airlift requirement and its ability to fully use the existing C-130Hs before providing additional capabilities.

In your response, you wrote that, based on historical mission-capable rates and projected maintenance and inspection schedules, the AAF requires at least three C-130Hs to ensure one operational aircraft at all times. To illustrate, you wrote that one of the two C-130Hs in the AAF inventory had been outside Afghanistan since late July for inspection, and had the second aircraft become unavailable, the AAF would have been without its medium-lift capability. While our review found that the AAF was flying the two aircraft at only 48 percent of their flight-hour capacity, we recognize the risk if the one remaining C-130H were to unexpectedly become unavailable. Therefore, we agree with your decision to provide the AAF with a third C-130H.

As for the fourth aircraft, I am pleased that DOD concurs with the recommendation to defer the decision on its delivery until a requirements review is completed. I hope that the AAF will continue to improve the utilization rates of its C-130Hs with DOD's assistance. The potential savings—about \$40.5 million (\$19.8 for the aircraft itself and \$20.7 million for maintenance, parts, training, and aircraft modifications) through 2017—of the cancelled fourth aircraft is significant and could allow the department to put those savings to better use. My priority has always been ensuring that taxpayer monies spent on Afghanistan reconstruction are used efficiently and effectively.

I request that your department share with us the results of the AAF medium-airlift requirements review once it is completed. Should you have any questions or need additional information, please contact Ryan T. Coles, Assistant Inspector General for Audits & Inspections, at [REDACTED]  
[REDACTED]. Thank you in advance for your attention to this matter.

Sincerely,

John F. Sopko  
Special Inspector General  
for Afghanistan Reconstruction

Enclosures:

- I: U.S. Department of Defense Response to SIGAR-14-80-AL dated September 19, 2014
- II: SIGAR-14-80-AL: Afghan Air Force C-130 Aircraft dated July 10, 2014

ENCLOSURE I: U.S. DEPARTMENT OF DEFENSE RESPONSE TO SIGAR-14-80-AL  
DATED SEPTEMBER 19, 2014



UNDER SECRETARY OF DEFENSE  
2000 DEFENSE PENTAGON  
WASHINGTON, D.C. 20301-2000

SEP 19 2014

POLICY

The Honorable John F. Sopko  
Special Inspector General for Afghanistan Reconstruction  
1550 Crystal Drive, 9<sup>th</sup> Floor  
Arlington, VA 22202

Dear Mr. Sopko:

Thank you for your letter of July 10, 2014, regarding the Department of Defense's (DoD) plan to provide four C-130H cargo aircraft to the Afghan Air Force (AAF). I am responding on behalf of the Secretary. After a careful review of your letter, DoD has decided to continue with delivery of a third C-130H and to defer decision on the delivery of a fourth C-130H until completion of a medium-lift requirements review, currently underway by DoD and NATO. DoD will make a decision on delivery of a fourth C-130H following completion of this analysis and following consultations with Afghanistan's new leadership, once in office.

Historic mission-capable (MC) rates and projected maintenance and inspection schedules require the AAF to have at least three C-130H aircraft to ensure one operational aircraft at all times. Within the U.S. Air Force (USAF), the C-130H has had an historic MC rate of 75.6 percent since 1991 and requires programmed depot maintenance (PDM) every six years, with isochronal (ISO) inspections every 18 months. Due to the conditions, available facilities, and resources at Kabul International Airport (KAIA), these services must be accomplished outside Afghanistan, removing the aircraft from the AAF's fleet for at least 180 days for PDM and for 45 days for ISO inspection.

As an example of the need to maintain a three-aircraft fleet, one of the two aircraft delivered to support the U.S. air advisory mission at KAIA has been outside Afghanistan since July 23, 2014, for ISO inspection. That aircraft is not scheduled to return to KAIA until later this month. Had the second C-130H become unavailable during this period the AAF would have been without its medium-airlift capability.

The 48-percent utilization rate of the two AAF C-130Hs reflects the developing nature of the AAF's air mobility system. The AAF received its first C-130H on September 27, 2013, and is presently operating with only one qualified C-130H aircrew, minus a qualified loadmaster. The USAF continues to provide C-130H qualification training to Afghan trainees. As the AAF's command and control capability develops and additional air crews are trained, DoD expects the AAF to improve the utilization rates of its C-130H fleet.

Thank you for your interest in this matter.

Sincerely,

Christine E. Wormuth



## ENCLOSURE II: SIGAR-14-80-AL: AFGHAN AIR FORCE C-130 AIRCRAFT DATED JULY 10, 2014

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**SIGAR**

Office of the Special Inspector General  
for Afghanistan Reconstruction

July 10, 2014

The Honorable Charles T. Hagel  
Secretary of Defense

General Lloyd J. Austin III  
Commander, U.S. Central Command

General Joseph F. Dunford, Jr.  
Commander, U.S. Forces-Afghanistan, and  
Commander, International Security Assistance Forces

Lieutenant General Joseph Anderson  
Deputy Commanding General, U.S. Forces-Afghanistan and  
Commander, International Security Assistance Force Joint Command

Brigadier General John E. Michel  
Commanding General, North Atlantic Treaty Organization Air Training Command-Afghanistan

I am writing to inform you of concerns regarding the Department of Defense's (DOD) plan to provide C-130 cargo planes to the Afghan Air Force (AAF). Our preliminary review of this plan indicates that not all of these aircraft may be needed. Action taken now could save substantial expenditures.

Providing the AAF airlift capabilities is a key component for the Afghan government to execute critical missions, including cargo transport, passenger transport, and casualty evacuation. As of June 2014, the United States had already delivered two C-130s to the AAF in Afghanistan with plans to deliver a third in August 2014, and a fourth by the end of 2014.

During our audit of U.S. support for the AAF to determine its capability to absorb additional equipment, we became aware of concerns regarding the C-130 program. First, we could not determine why DOD, in order to provide airlift of medium weight loads to the AAF, decided to provide four C-130s rather than different quantities or types of aircraft. Although the decision was made in January 2013 to purchase four C-130s, the AAF's requirement for those aircraft had not been updated since March 2010. Second, we analyzed flight data for the two AAF C-130s currently in Afghanistan and found that they are being underutilized, which raises questions about whether additional aircraft are truly needed. Lastly, during my visit last month, I was informed about support problems associated with training, spare parts, and maintenance for the two C-130s currently in the inventory.

Issues with sustaining U.S.-funded infrastructure and equipment in Afghanistan are not new. However, the opportunity exists with the C-130s to ensure that the Afghans are capable of supporting what we have already given them before providing additional aircraft. Accordingly, I suggest that, pending a review of the AAF's medium airlift requirements and its ability to fully utilize the C-130s currently in the inventory, DOD delay delivery of additional C-130s. If DOD's review indicates additional C-130s are unnecessary, DOD should not provide them. Even the elimination of one C-130 could save up to \$40.5 million through 2017. The enclosure to this letter provides more detailed information supporting my suggestion.

1550 Crystal Drive, 9th Floor  
Arlington, Virginia 22202

Mail: 2530 Crystal Drive  
Arlington, Virginia 22202-3940

Tel: 703 545 6000

[www.sigar.mil](http://www.sigar.mil)

Should you have any questions or need additional information, please contact Ryan T. Coles, Assistant Inspector General for Audits & Inspections, at [REDACTED] or [REDACTED], or Tinh T. Nguyen, Principal Deputy Assistant Inspector General for Audits & Inspections, at [REDACTED] or [REDACTED]. Thank you in advance for your attention to this matter.



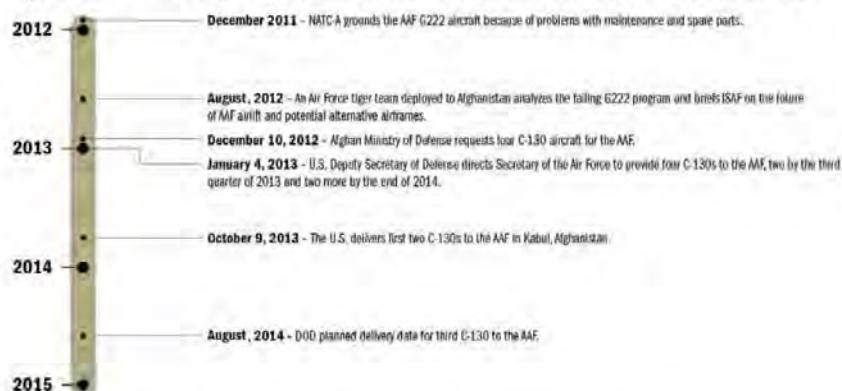
John F. Sopko  
Special Inspector General  
for Afghanistan Reconstruction

Enclosure

## CONCERNS REGARDING THE REQUIREMENT FOR AND UTILIZATION OF C-130 AIRCRAFT FOR THE AFGHAN AIR FORCE

In January 2013, following concerns with the G222 medium airlift program,<sup>1</sup> the Deputy Secretary of Defense directed the Secretary of the Air Force to provide four C-130s<sup>2</sup> to the Afghan Air Force (AAF) by the end of 2014. The North Atlantic Treaty Organization Air Training Command-Afghanistan (NATO-A), which is a subordinate command of the International Security Assistance Force (ISAF) Joint Command, trains the AAF on the operation of the C-130s. As of June 2014, the United States had delivered the first two C-130s to the AAF with plans to deliver a third C-130 in August and the fourth by the end of 2014. Figure 1 shows the timeline of the C-130 program.

**Figure 1 - Timeline of Significant Events in the Selection and Delivery of C-130s for the AAF**



Source: SIGAR analysis of NATO-A C-130 program office, and Combined Security Transition Command-Afghanistan (CSTC-A) information.

The first two C-130s were provided to the AAF from existing U.S. Air Force stock at a combined cost of \$77.1 million—\$39.6 million for the two C-130s, and an additional \$37.5 million for spare parts, equipment, and other charges. Likewise, the United States will provide the final two C-130s through existing U.S. Air Force stock at a cost of \$39.6 million for two C-130s plus additional charges that were not yet finalized as of June 2014. Photo 1 shows one of the two AAF C-130s in Kabul.

<sup>1</sup> In 2008 the United States contracted to provide 20 G222 medium lift aircraft to the Afghan Air Force. The U.S. Air Force flies the C-27A aircraft which is a modified version of the G222. According to a U.S. Department of Defense Office of Inspector General report, the G222 program was unsustainable because the aircraft were often unavailable to fly due to problems with maintenance and spare parts (DODIG-2013-040, *Critical Information Needed to Determine the Cost and Availability of G222 Spare Parts*, January 31, 2013). Also, in a December 2013 letter, SIGAR raised concerns regarding the decision to purchase the G222 and their disposal.

<sup>2</sup> The two aircraft provided to the AAF are C-130 Hercules (C-130H), which is one type of C-130. This letter will refer to the C-130Hs as C-130s.

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**Photo 1 - AAF C-130 on the Flightline at the Kabul Air Wing—Kabul International Airport**



Source: NATC-A April 20, 2014

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#### **DOD Unable to Provide Documentation to Support Its Decision to Provide Four C-130s to the AAF**

Our discussions with Department of Defense (DOD) officials and review of available documents shows DOD initially consulted experts and performed analyses to identify the best platform to support medium airlift for the AAF. However, DOD could not provide us with documentation to support the final decision to select four C-130s. Specifically, as the result of problems with the G222 program, the U.S. Air Force Central Command assembled a three-person "tiger team" that deployed to Afghanistan in August 2012 to assist ISAF in analyzing different options regarding the future of AAF medium airlift. Using some general requirements including cargo weight, passenger numbers, ability to operate in Afghanistan, and cost and schedule, the team considered 18 different aircraft. Ultimately, the team identified 5 aircraft—C-130E/H, CASA-235, CASA-295, C-27J, and C-130J—as being able to meet the AAF's medium airlift requirements. In addition, the team proposed acquisition approaches including open competition, sole source contracting, and purchasing U.S. stock. At the conclusion of deployment to Afghanistan, the tiger team did not provide a formal recommendation about which aircraft to select to meet the medium airlift requirement. In the tiger team's August 22, 2012 presentation to ISAF, the team proposed an open competition to identify the best aircraft at the best price. According to October 2012 talking points for the Deputy Secretary of Defense, the Commander ISAF directed NATC-A to develop a requirements document for the follow-on to the G222 program. According to the talking points, the tiger team raised concerns that the C-130 would be too complex and costly for the Afghans. In addition, the Air Force noted concerns that due to the necessary lead time for contractor support and training, the C-130 would be an "empty" asset for the Afghans, as they would not yet be fully trained to use the aircraft.

In November 2012, NATC-A and the tiger team, anticipating a possible open competition, created an initial capabilities document that outlined the AAF's requirements for a new aircraft, including key performance parameters. The Commanding General, CSTC-A, and the AAF Commander coordinated and signed the document. However, the initial capabilities document was never used. Notwithstanding the concerns raised by the tiger team and others, on January 4, 2013 the Deputy Secretary of Defense directed the Secretary of the Air Force to provide four C-130s to the AAF—two in 2013 and two by the end of 2014.

We were unable to determine DOD's reason for selecting the C-130s over other aircraft. We requested information on the decision for the C-130 and its quantity from NATC-A, the Air Force's C-130 Program Office, U.S. Central Command, U.S. Forces-Afghanistan, 9<sup>th</sup> Air & Space Expeditionary Task Force under the ISAF Joint Command, and CSTC-A. These officials told us that they had no information on the decision. The tiger team leader told us that the C-130 represented the fastest solution, but that DOD may have considered other factors.

When we requested the most recent U.S. government review of AAF requirements, NATC-A provided the March 2010 *Afghanistan National Security Forces Airpower Requirements Review*, conducted by U.S. Air Force Central Command. According to NATC-A, the review was used as a guiding document for aircraft purchases and defined the capabilities necessary for the AAF, but NATC-A noted a new review is needed to account for changes in budget, level of coalition support, and ability of the AAF to be self sustaining. Most important, the planned AAF fleet was different in March 2010 than the current planned fleet, so requirements determined at that time may no longer apply. For example, in March 2010, the AAF had a planned fleet of 53 Mi-17s and 20 G222s to provide airlift.<sup>3</sup> The review recommended purchasing C-208 aircraft to provide additional capacity and a cheaper alternative to the Mi-17 and G222s planned at the time.<sup>4</sup> The United States ultimately purchased 26 C-208s for the AAF. Currently, the AAF fleet plan consists of 58 Mi-17s, 26 C-208s, and 4 C-130s. This likely constitutes a different airlift capacity than the previous fleet, as the addition of the C-208s and the elimination of the G222s had not been taken into account when originally considering the requirements for the purchase of the C-130s. Furthermore, these original requirements called for medium airlift aircraft capable of transporting a High Mobility Multipurpose Wheeled Vehicle (HMMWV). Later documents, however, including the unused Initial Capabilities Document, removed this HMMWV transportation requirement, raising questions as to whether the requirements developed in the March 2010 review were still valid. Furthermore, according to NATC-A, since receiving the C-130s, the AAF has not used the aircraft to move any vehicles such as a HMMWV and has no current requirement to be able to do so. Given so many changes in planned airlift capacity and requirements, the March 2010 review may no longer be valid.

### AAF Is Not Fully Utilizing Its Existing C-130s

The AAF is not currently using the two C-130 aircraft to their full capacity. We analyzed AAF flight data from October 2013 through May 2014 to determine current C-130 utilization rates and compared these rates against maximum C-130 capacity for flight hours and weight. According to NATC-A, when taking into account certain factors within the Afghan operating environment, the maximum operating flight hour capacity of a C-130 is 36 hours per month, for a total of 72 total flight hours per month.<sup>5</sup> We found that from October 2013 through May 2014, the C-130s flew 261 hours out of a possible 555 hours, or about 48 percent of full capacity.<sup>6</sup> Figure 2 shows the number of flight hours logged by the two C-130s each month versus maximum capacity.

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<sup>3</sup> The Mi-17 is a Russian-built transport helicopter.

<sup>4</sup> The C-208 is a light airlift transport plane made by Cessna.

<sup>5</sup> Our analysis used the NATC-A-determined maximum operational capacity for the two C-130s of 72 flight hours per month. NATC-A's 72 flight hour capacity comes close to the estimated 73 flight hours per month based on the aircraft's average mission capable rate in Afghanistan.

<sup>6</sup> Because the C-130s arrived in Afghanistan on October 9, 2013, we pro-rated maximum flight hours for October 2013 to reflect 22 possible service days and approximately 51 potential flight hours.

**Figure 2 - Two AAF C-130 Flight Hours per Month**



Source: SIGAR analysis of AAF mission data

Note:

\*The C-130s for the AAF arrived on October 9, 2013. Therefore, we prorated the possible flight hours for that month accordingly to 51.

In addition, we reviewed the weight utilization for passengers and cargo of the C-130 on a monthly basis. We found that the C-130s, on average, were less than half full in terms of passengers and cargo, only carrying 41 percent of their maximum capacity. Furthermore, we found that the AAF is primarily using the aircraft to transport passengers and light cargo, both of which could be transported by other types of aircraft or ground vehicles. Of the 87 C-130 missions flown between October 2013 and May 2014, 44 missions (51 percent) carried only passengers without cargo.<sup>7</sup>

According to NATC-A, the C-208 is also currently underutilized, and, therefore, available to conduct additional missions possibly in lieu of providing additional C-130s. Using multiple C-208s is also more cost effective: a C-130's full cost per flight hour is approximately \$41,000, which is more than three times the \$12,240 cost per flight hour of using nine C-208s to transport the same cargo.<sup>8</sup> In addition, the mission flying the greatest tonnage of cargo during the 7-month period was still only carrying 38 percent of the C-130's capacity, or 6,000 kilograms of the potential 16,000 kilogram cargo capacity.

NATC-A officials stated that they expect the need to transport passengers and cargo to increase as the AAF increases their capabilities. However, no official assessment has been conducted to estimate future requirements or utilization rates. Given the systematic underutilization of the current C-130s since the introduction of the aircraft in October 2013, we question the need for additional aircraft. According to the Air Force's C-130 program office estimates, eliminating delivery of one C-130 could save up to \$40.5 million—\$19.81 million for the C-130 itself and \$20.7 million in maintenance, parts, training, and aircraft modifications through fiscal year 2017.<sup>9</sup>

<sup>7</sup> We did not include in our analysis any missions identified as carrying more than the NATC-A stated maximum capacity per flight and outside a margin of error.

<sup>8</sup> NATC-A's C-130 estimated cost per flight is based on four C-130s and may change if the total number of aircraft decreases.

<sup>9</sup> According to the C-130 program office the costs are estimates since the contract has not yet been awarded. In addition, these estimates did not consider the costs of military base operations and logistics support such as aircraft fuels, flight line facilities, base lodging, and dining facilities.



HEADQUARTERS  
United States Forces-Afghanistan  
Kabul, Afghanistan  
APO AE 09356

USFOR-A CDR

28 November 2014

*4pm 17 Dec 2014*

MEMORANDUM THRU Commander, United States Central Command, 7115 South Boundary Boulevard, MacDill Air Force Base, FL 33621

FOR Secretary of Defense 1000 Defense Pentagon, Washington, DC 20310-1000

SUBJECT: Recommend Accept Delivery of C-130 #4 for AAF

1. The SIGAR Alert Letter dated 10 July 2014 expressed concerns regarding the plan to equip the Afghan Air Force (AAF) with four C-130 aircraft. NATO Air Command Afghanistan (NAC-A) evaluated the AAF C-130 program and recommended delivery of the third C-130 aircraft. However, NAC-A recommended deferring the decision on the fourth C-130 until completion of a thorough analysis of AAF medium lift requirements in accordance with SIGAR concerns. Subsequently, General Dunford and OSD informed SIGAR of the decision to accept the third C-130 and defer delivery of the fourth pending conclusion of the NAC-A analysis.
2. NAC-A has completed their analysis of the AAF medium airlift requirements. Although they found the 2010 requirement to move a Quick Reaction Force Battalion unrealistic, they revised that requirement to move a QRF infantry company and equipment within 24 hours based on ANSF employment. They also validated requirements for Presidential Support, Disaster Response, Casualty Evacuation, Aircrack training, and ANA Corps resupply. The AAF has developed a CONOP for a hub and spoke airlift system for troop movement and logistics support to meet these demands. Furthermore, AAF C-130 utilization has increased to 70% of contracted hours and is expected to grow to 88% once their airlift CONOP is fully executed. Combined, the QRF requirements, airlift CONOP, and increased utilization support an AAF fleet of four C-130 aircraft.
3. The NAC-A analysis and increased performance of the AAF forecast a bright future for AAF air mobility. Therefore, I am continuing delivery of the fourth C-130H aircraft in January 2015.

Encl

JOHN F. CAMPBELL

General, U.S. Army

Commander

International Security Assistance Force/  
United States Forces-Afghanistan

## Afghan Air Force C-130H Requirements Review Does the AAF need a 4<sup>th</sup> C-130?

The NATO Air Command – Afghanistan (NAC-A) conducted a review of Afghan medium airlift requirements, July–October 2014 to validate the efficacy of adding a fourth C-130H to the Afghan Air Force (AAF) inventory. NAC-A's review also addressed the Special Inspector General for Afghanistan Reconstruction (SIGAR) concerns. The SIGAR Alert Letter (Attachment 1) cited concerns about underutilization of the two C-130s the AAF had at the time, sustainment challenges, and a lack of clarity on updated Afghan airlift requirements. Ultimately, NAC-A recommends moving forward with providing the AAF with a fourth C-130.

This review does not attempt to re-baseline the GIRQA medium lift requirements. Instead, it simply looks at the Afghanistan National Security Forces (ANSF) C-130 employment concept of operations (CONOPS) to:

- Determine if it is an effective and responsible use of U.S.-provided assets
- Discern whether the medium airlift requirement set forth in the 2010 ANSF Airpower Requirements Review (Attachment 3) remains valid.

### AAF Concept of Operations and Operational Flexibility

Based on historical C-130H logistical data, mission capable rates, and the required out of country depot level 18 month inspection, a fleet of four C-130s provides the capability to field two flyable C-130s 80 percent of the time.

The AAF, with support from NAC-A, is building an airlift CONOPS that includes C-130s, C-208s and Mi-17s. As part of this plan, the AAF will execute a daily C-130 channel mission that rotates among six primary airfields: Kabul, Herat, Shindand, Shorbak (Bastion), Kandahar and Mazar-e-Sharif. Missions will hub out of Kabul and fly to each of these airfields 2-3 times per week. This system provides a predictable schedule to move passengers and cargo in support of the Afghan National Security Forces. Notably, there is a growing recognition within the ANSF that air is a safer method of movement over ground lines of communication due to insurgent attack and improvised explosive devices.

The AAF will use the second aircraft to provide operational flexibility. Primarily, they will employ it in an alert status to provide medium lift capacity for urgent and emerging missions such as ammunition resupply, casualty evacuation (CASEVAC) and human remains recovery. While the C-208 remains the primary fixed wing platform for CASEVAC and human remains recovery, the C-130 fills a critical gap for both larger contingencies and occasions where the weather is not suitable for the light lift C-208. The second C-130 also provides capacity for special missions, such as Presidential movement, and responses to humanitarian crises like the Badakhshan landslide that occurred in May, 2014. This capacity helps build government legitimacy and relieve human suffering. Finally, in instances where the second scheduled aircraft is not required for an alert or special mission, it will be available for critical aircrew training to continue building experience and operational capacity for the maturing Afghan Air Force.

### AAF Medium Airlift Requirements Review

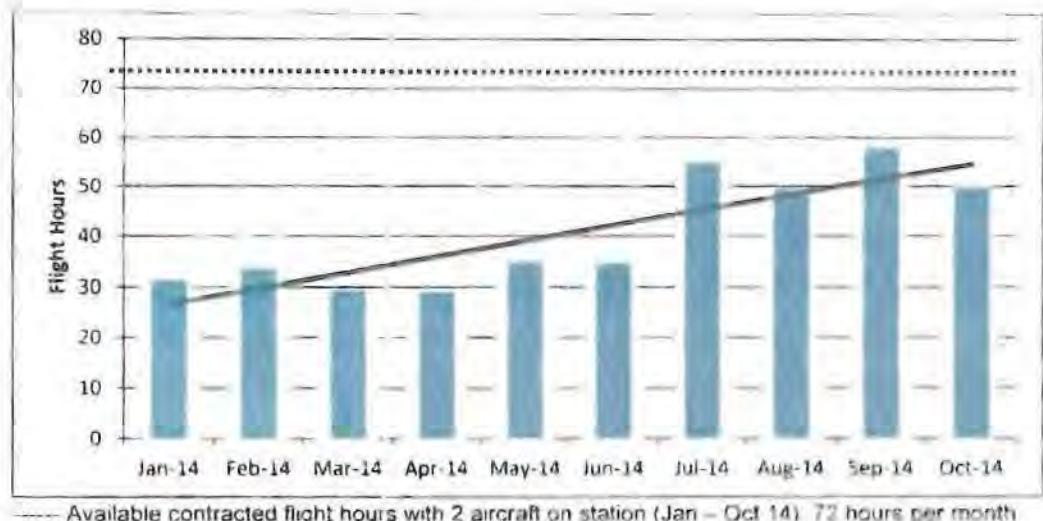
The 2010 ANSF Airpower Requirements Review (Attachment 3, page 27) set the AAF's most challenging medium lift requirement as the capability to airlift an infantry battalion. While GIRoA has not formally updated this requirement, both the current Chief of the General Staff of the Afghan National Army and the Commander of the Afghan Air Force acknowledge that the requirement remains valid and consistent with Afghanistan's National Military Strategy. However, they also acknowledge that it is aspirational as they cannot currently afford the airlift platforms to meet that requirement.

Instead, their stated interim requirement is the ability to airlift a reinforcing infantry company from Kabul to the 205<sup>th</sup> Corps (Kandahar), 207<sup>th</sup> Corps (Herat), 209<sup>th</sup> Corps (Mazar-e-Sharif) or 215<sup>th</sup> Corps (Shorab/Bastion) in a 24 hour period. Appendix 1 illustrates that 2 flyable C-130s are needed to meet this requirement. While this scenario is not likely to occur daily, it remains a valid requirement based on ANSF strategy.

The 2010 ANSF Airpower Requirements Review also identified a requirement for Presidential Airlift. ISAF and the AAF have received 5 requests in the last 6 months for Presidential movement, and expect the trend to continue with the current POA. The previous POA moved with a very large party (300 man team), but the current President's movement requirement appear less based on a small sample size. That said the Presidential movement requirement is valid.

#### Underutilization Concerns

NAC-A concurs with the SIGAR data and analysis that the AAF only executed 48 percent of their flying hours between October 2013 and May 2014. However, the Afghan C-130 program was in its infancy. Thus, the data is not indicative of the expected utilization once the mobility system matures. Simply put, the speed of aircraft delivery outpaced the capability to train Afghan C-130 crews and build a GIRoA airlift architecture. At the time of the SIGAR analysis, the AAF did not have one full C-130 qualified crew. Additionally, during this first year, both the Coalition and AAF were focused on training and not on maximizing the efficiency of the AAF mobility system. The AAF has seen a marked increase in executed flying hours since the first C-130 aircrew became fully qualified in June 2014 (see chart below).



#### Updated Flying Hours in 2014

The AAF C-130 utilization rate will continue to grow as the AAF continues building qualified aircrew. NAC-A estimates that the utilization rate will grow to as high as 88 percent as they continue to mature their lift CONOPS. Utilization rate, consistent with SIGAR's use of the term, is the percentage of maximum contractually available hours that are flown. The contractual sustainment capability for the C-130 fleet is 36 hours per aircraft per month, or 1,728 available annual fleet-hours for four aircraft. Within the AAF CONOPS, they intend to fly five channel missions per week with an average mission duration of 4.25 flight hours. The second daily aircraft is expected to fly, on average, 3 days per week with an estimated 3.0 hour duration for either alert, special, or training missions. Across the year, this equates to 1,528 hours, or 88 percent of the available hours.

#### Sustainment Concerns

The SIGAR Alert Letter raised concerns about the logistical sustainability of the Afghan C-130 fleet. It mentioned challenges with spare parts and maintenance, but did not specifically detail those challenges. For the six months May – October 2014, the AAF C-130H maintained an average mission capable rate of 74.9 percent, which is consistent with historical fleet averages. USAF Airmen currently provide aircraft maintenance, but the AAF has their first wave of maintainers scheduled to graduate from C-130 maintenance training in the U.S. by November 2015. Follow-on maintenance and maintenance training will be conducted in-country by U.S. contract logistic support. Finally, while the distance between Afghanistan and the United States can exacerbate spare parts delivery timelines, there are no systemic issues of major concern.

#### Conclusion and Recommendation

Whether examining the C-130 requirement from an operational flexibility perspective or solely from an airpower requirements perspective, a minimum of 2 flyable C-130s are required. Based on historical data, four C-130Hs are required to consistently generate two flyable aircraft. Additionally, as the AAF continues to build aircrew and grow an executable airlift CONOP, the issues of underutilization and sustainment will go away.

Recommendation: Deliver the 4<sup>th</sup> C-130 as scheduled in Jan 2015

Attachments:

- 1 SIGAR Alert Letter, 10 July 14
2. DoD Response Letter, 19 Sep 14
3. 2010 ANSF Airpower Requirements Review, 28 Feb 2010



Attach 1 - SIGAR Alert  
Letter 10 Jul 14.pdf



Attach 2 - DoD  
Response Letter 19 S



Attach 3 - ANSF APR  
Review Report 2010.

#### APPENDIX I: C-130H AIRLIFT CAPABILITY VS AAF REQUIREMENTS

The 2010 ANSF Airpower Requirements Review, conducted by U.S. Air Forces Central Command, developed an airlift measure unit called a Combat Platoon Equivalent, or CPE. One CPE equals the airlift capacity to transport 15 combat

troops (300 pounds each) or 4,500 pounds of cargo. A typical Afghan National Army infantry company is comprised of 150 combat troops and 18 light technical vehicles (e.g. a Ford Ranger), or 28 CPE. Of note, some infantry companies also have 8 to 15 M1151A1 HMMWV up-armored and troop enclosed vehicles with a Gross Vehicle Weight of = 12,100, however this is not part of their quick reaction force. In most cases, a C-130H can carry one of these vehicles at a time, and is essentially roughly an additional 3 CPE per vehicle

For a planning factor, a C-130 can carry four CPE. Based on a flight time from Kabul of 1 hour and 40 minutes to the farthest Corps (207<sup>th</sup> Corps at Herat) and counting load (1 hour) and offload (30 minutes) time, each C-130 can make five outbound trips per 24 hour period, or 20 CPE per aircraft. This also assumes there are two full aircrew available for each C-130 (Note: as of the writing of this analysis there are not four full Afghan C-130 crews, but they are in the pipeline being trained). Two operating C-130s are thus required to airlift an infantry company within a 24-hour period. (Note: airlift capability will be reduced on hotter days due to the high field elevation of Kabul and required climb gradients to ensure terrain clearance from surrounding mountains. For example, when above 30 degrees Celsius one C-130 is only able to carry 2 CPEs due to reduced climb performance at a high temperature and high altitude)