

Project On Government Oversight

Rescue at Risk: Crucial Helicopter Requirement Weakened

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EXECUTIVE SUMMARY

Air Force Special Operations Command (AFSOC) program officials improperly weakened one of the most important requirements in a major search and rescue helicopter contract in order to allow Boeing to compete. In doing so, they subverted the safety of service members to the parochial interests of the Pentagon and Boeing.

The \$10-\$15 billion contract for a replacement combat search and rescue helicopter (dubbed CSAR-X), which is the Air Force's second highest procurement priority, has been the focus of two bid protests filed with the Government Accountability Office (GAO). The Air Force is preparing to re-bid parts of the contract for a second time following GAO decisions that confirmed the concerns raised by Boeing's competitors.

One of the most important requirements for the new helicopters is the amount of time in which they have to be deployed to, and ready to go in, theater. The need for search and rescue during a conflict is inherently sudden and unpredictable, and time is therefore critical to success. Yet, the CSAR-X program office at AFSOC watered down the deployability key performance parameter, sneaking the change in quietly to avoid scrutiny from senior Air Force and Defense Department officials responsible for approving weapons system requirements. The change made vague the allowable maximum time in which a helicopter must be ready to fly missions after being deployed via cargo aircraft.

The circumstances surrounding the change merit further attention from Congress and the Department of Defense Inspector General. While the Project On Government Oversight has no reason to believe there was any illegality or corruption in the process, the system was so subverted, and consequently the needs of the warfighter so undermined, that the IG should investigate the deployability requirement change.

Key Events

February 2002—The completed Combat Rescue Analysis of Alternatives identifies slow reaction time, which encompasses time to deploy helicopters, as one of seven crucial deficiencies needing correction. It also rules out the Chinook as a CSAR-X candidate.

October 2003—CSAR mission transferred from Air Combat Command to Air Force Special Operations Command.

April 2005—Boeing meets with AFSOC at Office of the Secretary of Defense's urging to brief them on the Chinook as a possible CSAR-X candidate. Boeing says it cannot meet the 3-hour mission ready deployability requirement.

May 2005—AFSOC personnel make a significant change to the deployability requirement and label it an *administrative* change rather than *substantive* or *critical*, ensuring that the Chinook can compete.

July 2005—OSD indicates that it wants to sole-source Chinooks for CSAR-X.

Early October 2005—Final Request for Proposals for CSAR-X released. Bids due by late November 2005.

November 2006—Initial CSAR-X contract awarded to Boeing for up to 141 Chinooks.

INTRODUCTION

The Department of Defense (DOD) has designated the Air Force as the lead service for the combat search and rescue (CSAR) mission, which is the task of performing rescue operations of isolated personnel in enemy territory. As a result, the Air Force must provide specialized rescue forces and supplies to all the services, as needed during combat operations.

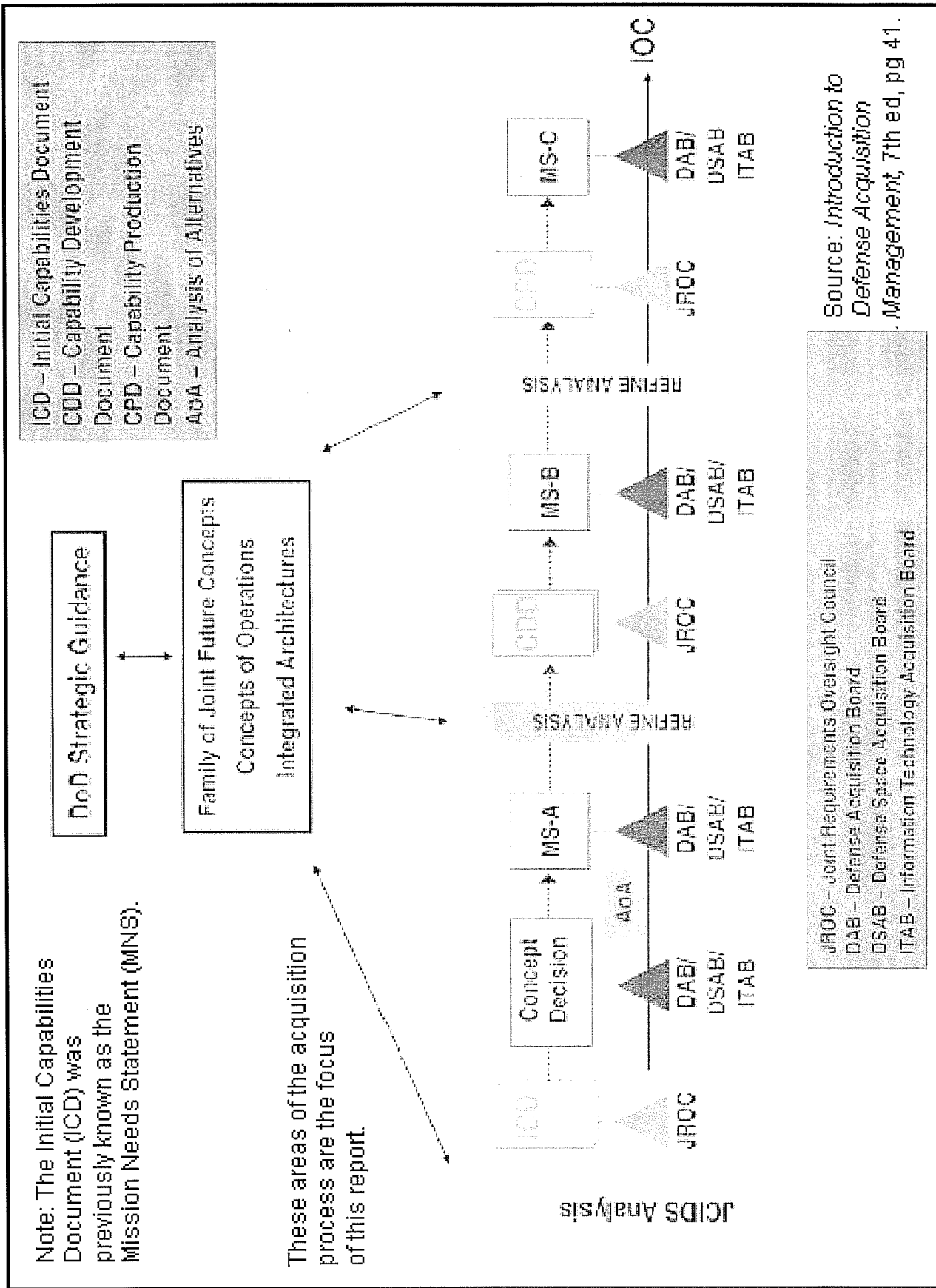
Every CSAR mission has three main components: arrival at the rescue site, location and rescue of isolated personnel, and departure from the site. Because isolated soldiers often face dangers from enemies, and may have injuries requiring medical attention, timing is critical and CSAR forces must respond as rapidly as possible.

To conduct rescue missions, the Air Force CSAR force currently relies on a fleet of HH-60G Pave Hawk helicopters (a variant of the Black Hawk, first used in 1981). In 1997, the Air Force's HH-60G System Program Office determined that the helicopters were approaching their flying hours service life limit and would soon need either a life extension upgrade or a replacement aircraft.

The defense acquisition process generally starts, per Pentagon regulations, with a Mission Needs Statement (MNS). Next, a study team—in this case, one organized by the Air Force's Air Combat Command (ACC)—looks at available and potential solutions for the mission needs, and compares their costs and benefits in an Analysis of Alternatives (AoA) document. The program office then drafts a series of documents, such as a Capability Development Document (CDD) and a System Requirements Document (SRD), that define the proposed solution's procurement requirements. Foremost among these requirements are the key performance parameters (KPP), which are the requirements most vital to a mission's success. Finally, the program office issues a final Request For Proposal (RFP) to potential bidders that details, among other things, how requirements will be tested. Every step in this acquisition process must be overseen and approved by the Joint Requirements Oversight Council (JROC), which is comprised of the Vice Chiefs from each service, to ensure acquisition meets the National Military Strategy and the needs of the warfighters. (See Graphic A.)

In 1997, the ACC, which housed the Air Force's CSAR program at the time, identified deficiencies in the rescue mission. The resulting MNS described seven top-ranked deficiencies, including a slow mission reaction time and limitations of the existing aircraft. Unlike some winged aircraft, helicopters are limited in their flight range and must take off from near where they are needed. Consequently, before CSAR forces can engage in missions, they must first transport helicopters to the theater of operations via airlift on cargo planes. Given the importance of mission reaction time, a rescue helicopter must be quickly loaded and unloaded from a cargo plane with minimal disassembly and reassembly. With that in mind, the ACC—with JROC's approval—designated airlift deployability as a KPP for the CSAR helicopter replacement procurement program (dubbed CSAR-X).

At the eleventh hour, the CSAR-X program office improperly weakened this KPP in a way that did not require oversight by the senior Air Force and Defense Department officials responsible for validating weapons system requirements at various stages in an acquisition program. The



Graphic A

The Joint Capabilities and Integration Development System (JCIDS)

For the purposes of this report, note that the Capabilities Development Document (CDD) follows the Analysis of Alternatives (AoA) and is validated by the Joint Requirements Oversight Council.

requirement change occurred after the Air Force had relocated the CSAR mission in 2003 from ACC to Air Force Special Operations Command (AFSOC). The CSAR mission was returned to ACC in 2006, but the requirements had already been weakened and the final RFP had been issued.

The CSAR-X program is the Air Force's second-highest procurement priority, and is expected to cost between \$10 and \$15 billion. The contract is for 141 helicopters to be delivered to the Air Force beginning in 2012. The Air Force's decision in November 2006 to award the contract to Boeing for its HH-47 Chinook surprised many. Air Force Chief of Staff General Michael Moseley told reporters, "I am not sure [the HH-47] is the one that I would have picked, but I am not the guy that picks."¹

After the initial award in November 2006, Boeing rivals Lockheed Martin and Sikorsky subsequently filed and won two rounds of bid protests with the Government Accountability Office (GAO). The GAO's decisions, which were based on Air Force cost evaluations, have, along with congressional scrutiny, left the program in limbo. POGO's findings raise further questions about the integrity of the program.

DEPLOYABILITY

The ability of combat search and rescue forces to deploy quickly is essential to the success of combat missions, and any delay in deploying those forces unnecessarily endangers the lives of isolated personnel. Several Air Force concepts of operations—a high-level description of how commanders envision certain types of military engagements—emphasize the need for combat search and rescue rapid deployability anywhere in the world within 24 hours of tasking. Without that ability, the U.S. runs "the risk that a single downing event will deleteriously impact operational objectives as a result of political pressures." (Appendix A)

Rapid CSAR deployability is so vital that several regulations were established to ensure it. For instance, the Department of Defense's (DOD) Joint Publication 3-50 on personnel recovery (PR) states, "Commanders must ensure the force flow includes *mission capable* PR forces that are commensurate with the risks of incurring an isolating event."² [Emphasis added] The DOD defines "mission capable" as the ability to perform at least one and potentially all designated missions.³ Another regulation, Air Force Doctrine Document 2-1.6, likewise states that rescue

¹ Munoz, Carlo. "Moseley Says Chinook Would Not Have Been His First Choice for CSAR-X." *Inside the Pentagon*. Vol. 18, No. 9. March 2, 2007.

² U.S. Department of Defense. *Joint Publication 3-50: Personnel Recovery*. January 5, 2007. p. V-10. http://www.fas.org/irp/doddir/dod/jp3_50.pdf (Downloaded November 1, 2007).

³ U.S. Department of Defense. *Joint Publication 1-02: Department of Defense Dictionary of Military and Associated Terms*. April 12, 2001 (As Amended through September 14, 2007). p. 351. http://www.dtic.mil/doctrine/jel/new_pubs/jp1_02.pdf (Downloaded November 1, 2007)

forces “should have the ability to execute time-sensitive deployments” and should be in place “prior to the start of hostilities.”⁴

According to the Air Force Doctrine Document, military commanders during Operation Enduring Freedom (OEF) in Afghanistan considered personnel recovery so essential that in 2001 they:

delayed decisive operations until the [Joint Force Command] established an adequate PR capability. Another way to look at this, OEF demonstrated the need to have PR forces in place prior to commencement of combat operations. Based on OEF and other historical data, the PR forces should be listed high on the combatant commander’s time phased force deployment list (TPFDL).⁵

Apparently, this reaction-time delay was not unusual. In 1997, the Air Force Air Combat Command (ACC), which at several points in time has been the operational user of CSAR forces,⁶ outlined the combat rescue mission’s “top-ranked deficiencies” in a combat rescue MNS.⁷ According to the MNS, one of the top-ranked deficiencies was the mission reaction time for existing rescue helicopters: they were “Too slow to the theater and too slow in theater to the recovery.”⁸

In response to a multi-year Air Force study, as well as to the widespread recognition that conventional search and rescue forces have consistently arrived late during missions, the Air Force made deployability a key performance parameter (KPP)—the highest priority performance requirement for a weapons acquisition—for the CSAR-X program.

⁴ U.S. Air Force. *Personnel Recovery Operations: Air Force Doctrine Document 2-1.6*. June 1, 2005. p. 21. http://www.dtic.mil/doctrine/jel/service_pubs/afdd2_1_6.pdf (Downloaded November 1, 2007). Air Force Doctrine Document (AFDD) 2-1.6 complements Joint Publication (JP) 3-50 on Defense Department doctrine for U.S. Air Force Personnel Recovery.

⁵ AFDD 2-1.6, p. 21. http://www.dtic.mil/doctrine/jel/service_pubs/afdd2_1_6.pdf (Downloaded November 1, 2007) Despite the delay, the primary CSAR force still required an additional month after the start of operations before they were able to fully take charge of the mission. Combat forces in Afghanistan relied on Special Forces with rescue training during the interim.

⁶ Responsibility for CSAR has, for the most part, resided with the ACC. One exception is the time period covered in this report.

⁷ The MNS was approved in 1999 by the Joint Requirements Oversight Council (JROC), a Defense Department body that vets requirements to ensure that they meet the needs of warfighters. JROC “[a]ssist[s] the Chairman of the Joint Chiefs of Staff in identifying and assessing the priority of joint military requirements (including existing systems and equipment) to meet the national military strategy.” Cornell University Law School. “§ 181. Joint Requirements Oversight Council.” *The Legal Information Institute*. http://straylight.law.cornell.edu/uscode/html/uscode10/uscode10_usc_sec_10_00000181----000-.html (Downloaded November 1, 2007) The MNS has since been replaced by the Initial Capabilities Document (ICD). They both state the approach needed to satisfy a capabilities gap.

⁸ U.S. Department of Defense. *USAF Combat Rescue Analysis of Alternatives (AOA): Combat Rescue Future Recovery Vehicle, Final Report Appendices Part 2*. February 1, 2002. p. 1-1.

THE ANALYSIS OF ALTERNATIVES STUDY

In 1999, the ACC initiated a study, called an Analysis of Alternatives (AoA),⁹ to evaluate and make recommendations for replacing its aging combat search and rescue aircraft.

In February 2002, the ACC officially released its final Combat Rescue AoA. The study compared the ability of five alternative aircraft concepts to satisfy the CSAR mission requirements at the lowest cost, and directly addressed ACC's 1997 top-ranked concerns for the combat rescue mission, including that of delayed reaction times. The five alternative aircraft concepts were keeping the HH-60G, the existing combat rescue recovery vehicle; upgrading, modernizing, and enhancing the capabilities of the existing recovery vehicle; acquiring new helicopters in the medium-lift category; acquiring tilt-rotor aircraft in the medium-lift category; and acquiring a mixed fleet of two different types of aircraft.

The AoA study team analyzed the five alternative aircraft concepts, with a view toward correcting the delayed reaction time deficiency, by comparing their deployment performance using two Measures of Effectiveness: "Time to Mission Ready" and "Deployment Footprint."¹⁰ The AoA defined "Time to Mission Ready" as "The total time from deployment notification until rescue forces are mission ready in theater," including the times needed to "configure, generate/load, deploy, recover/unload, and reconfigure" the search and rescue aircraft during each segment of deployment. Furthermore, this total time "addresses time required to set-up logistics footprint."¹¹

After factoring in cost and risk factors, the AoA study team recommended a medium-lift helicopter concept.¹² Several systems, including Boeing's Chinook, "were considered, but eliminated during the analysis. They were eliminated because they could not realistically meet the [Initial Operational Capability]¹³ (by many years) or were worse than the baseline in key MNS deficiencies."¹⁴ In other words, the rejected alternatives were considered worse than the current combat rescue helicopter in important areas.

In fact, the 2002 AoA explicitly ruled out Boeing's Chinook, stating that the Chinook:

is a heavy-lift helicopter in use by the US Army. The contractor, Boeing, did not respond[,] providing no data with which the Study Team could work. Further, the very large size is beyond the needs of this mission area. Informally, the contractor told the

⁹ According to the Air Force, AoAs "influence the investment of large sums of defense funds. As a result, they receive multi-layered direction and oversight from start to finish. AoA results are usually briefed at high levels in the Air Force and the DoD." Office of Aerospace Studies. *AoA Handbook*. p. 2. <http://www.oas.kirtland.af.mil/AoAHandbook/1.html>. (Downloaded November 1, 2007)

¹⁰ The Deployment Footprint measure is the logistics needed to assemble and maintain a mission vehicle. The Deployment Footprint is not addressed in POGO's report because it did not significantly impact the change to the key performance parameter we were investigating.

¹¹ *Combat Rescue Analysis of Alternatives*. MoE 1-1, p. 4-4.

¹² *Combat Rescue Analysis of Alternatives*. p. 9-6.

¹³ The Initial Operational Capability is the timeframe for receiving and putting into use the first batch of production aircraft.

¹⁴ *Combat Rescue Analysis of Alternatives*. p. 3-2.

Study Team that its size and drawdown of production were primary reasons they did not respond.¹⁵

Clearly, at the time, Boeing itself did not think its Chinook would be a viable candidate, partly on the basis of its large size.

Although Chinooks have been used for CSAR missions in the past when vehicles specifically designated for CSAR missions were unavailable, they had mixed results. One notable failure by the Chinook to perform the CSAR mission is the June 2005 Operation REDWING in Afghanistan.

In June 2005, a Navy SEAL team was ambushed by dozens of Taliban fighters in the mountainous ridges of Afghanistan's border with Pakistan. All but one member of the four-person team had been killed, and the decision was made to use a Chinook for the rescue mission. Pave Hawks, the dedicated CSAR platform, were low on fuel and unavailable for use at the time. Tragically, the rescue attempt by the Chinook only compounded the disaster. As the Chinook approached the rescue site, the Taliban hit the helicopter with a rocket-propelled grenade. All sixteen rescuers on board were killed.

Planners considered sending in another Chinook to attempt to rescue the Navy SEAL, but "the smaller HH-60 [Pave Hawk], the planners concluded, could navigate the turns approaching Sabray more easily than a lumbering Chinook."¹⁶

Sixteen rescuers died during the CSAR mission. The Navy SEAL was ultimately rescued by the Pave Hawk search and rescue crew. According to POGO sources, the tragedy during REDWING rescue mission is among the reasons many in the combat search and rescue community have opposed the Chinook as the next CSAR platform.

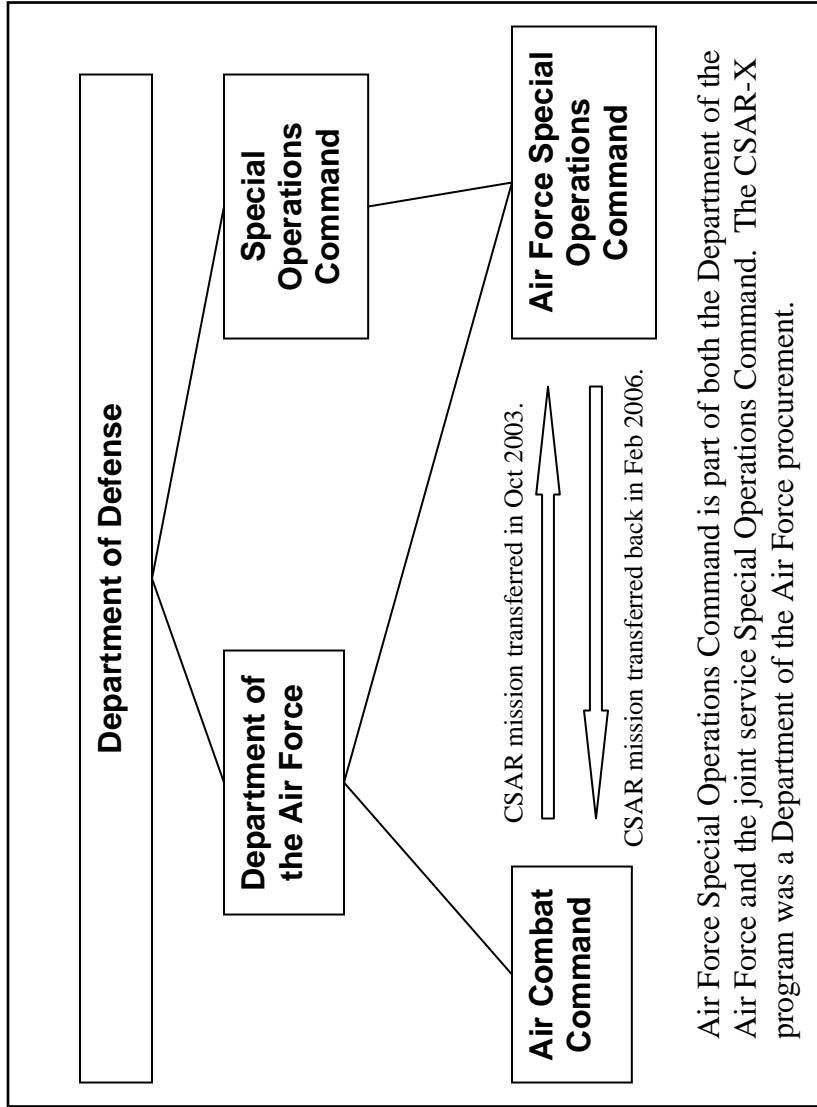
CHANGE TO KEY PERFORMANCE PARAMETERS

In October 2003, after ACC completed its Analysis of Alternatives, the CSAR function was transferred from ACC to AFSOC. (See Graphic B.) Although the CSAR-X program is an Air Force weapons acquisition program, AFSOC serves two masters—the Air Force and the joint service Special Operations Command (SOCOM).¹⁷ SOCOM had used Boeing's Chinook in the

¹⁵ *Combat Rescue Analysis of Alternatives*. p. 3-3.

¹⁶ Blumenfield, Laura. "The Sole Survivor: A Navy Seal, Injured and Alone, Was Saved By Afghans' Embrace and Comrades' Valor." *The Washington Post*. June 11, 2007. http://www.washingtonpost.com/wp-dyn/content/article/2007/06/10/AR2007061001492_pf.html (Downloaded November 8, 2007)

¹⁷ Additionally, although AFSOC crafted the CSAR-X requirements, the Aeronautical Systems Center (ASC) managed the procurement. The ASC, located at Wright-Patterson Air Force Base, Ohio, is a product center within the Air Force Materiel Command (AFMC) that "designs, develops and delivers dominant aerospace weapon systems and capabilities for U.S. Air Force, other U.S. military, allied and coalition-partner warfighters, in support of Air Force leadership priorities." United States Air Force: Wright-Patterson Air Force Base. *Aeronautical Systems Center*. <http://www.wpafb.af.mil/asc/index.asp>. (Downloaded November 1, 2007)



Graphic B

past, although never for a dedicated CSAR platform, and was in the process of acquiring more for other programs.

It was while the CSAR mission was housed with AFSOC that the Capability Development Document (CDD) was prepared. The CDD describes the performance requirements warfighters seek in a weapons system—attributes “so significant that they must be verified by testing and evaluation.”¹⁸ The most essential program requirements are the KPPs, and the CDD lists the minimum criteria needed to meet those requirements. KPPs must be approved by the Joint Requirements Oversight Council (JROC) before they are finalized.

In December 2004, AFSOC released a draft CDD that detailed “4 unique key performance parameters (KPPs) essential to execution of the CSAR mission: Combat Radius, Rotor Downwash, Net Ready, and Deployability.”¹⁹ For the deployability KPP, the draft CDD stated:

The PRV [Personnel Recovery Vehicle] must be capable of supporting worldwide operations (4000 nm [nautical miles]) within 24 hours. The aircraft must be configurable for deployment (self-deployment or USAF C-5 or C-17) within 3 hours and be *mission ready* within 3 hours of arrival at destination (T, KPP). Two hours for deployment configuration and 2 hours for *mission ready* (O); USAF C-5 and C-17 (O). [Emphasis added] (Appendix A)

The (T, KPP) after the “mission ready within 3 hours of arrival” requirement indicates that it is a threshold requirement—an absolute minimum standard that must be achieved for the vehicle to perform effectively. The (O) signifies that “2 hours for mission ready” is an objective that surpasses the minimum threshold, a desired goal to be achieved if possible.

The draft CDD included a Rationale for the deployability requirement that clearly shows the requirement was designed to correct the existing mission reaction time deficiency, noted in the ACC’s Mission Needs Statement. The Rationale stated that the key tenet was to “execute the assigned mission anywhere in the world within 24 hours of tasking.” The Rationale further stated:

As part of the total force concept, the PRV must be capable of supporting these operations. Key to this capability is the PRV rapid deployment capability. Showing up late leaves strike forces without a Personnel Recovery option and increases the risk that a single downing event will deleteriously impact operational objectives as a result of political pressures. A 4000 nm deployment range is required for global coverage based on current locations of PR assets. (Appendix A)

¹⁸ Chairman of the Joint Chiefs of Staff. *Instruction CJCSI 3170.01F: Joint Capabilities Integration and Development System*. May 1, 2007. p. A-8.

¹⁹ Capability Development Document for Personnel Recovery Vehicle (PRV). December 6, 2004. p. ii.

Then, in April 2005, AFSOC requested a meeting²⁰ with Boeing at the behest of the Office of the Secretary of Defense's (OSD) acquisition office. At the meeting, Boeing briefed AFSOC on its MH-47G version of the Chinook, which SOCOM was in the process of procuring for other programs. Boeing told AFSOC that the Chinook could not meet one key aspect of the deployability KPP, so could not compete for the CSAR-X contract. Specifically, Boeing did not believe the Chinook could meet the deployability requirement that the CSAR-X vehicle be able to be airlifted to the mission site, and within three hours be reassembled and mission ready.

After the April 2005 meeting, according to POGO sources, an AFSOC official requested that the Air Force Air Staff—the highest echelon in the Air Force—double the three-hour mission ready requirement to a six-hour mission ready requirement. The Air Staff refused because not only were they opposed to weakening the requirement, but the CDD outlining the deployability KPP with the three-hour mission ready standard was close to finalization by JROC. Such a significant change would first have to pass through the requirements oversight process, to be vetted by JROC and even by the Air Force Requirements Oversight Council (AFROC)—a process that would push the program back by several months.

But, as a 2005 *Defense News* article mentioned, “complex internal dynamics are shaping the competition even before it gets under way,” and the Special Forces were part of those dynamics:

while the helicopter will be an Air Force asset, managed by its special operations, they fall under the Army Special Operations Command²¹ —and the Army loves its Boeing CH-47s,²² a variant of which likely will be another candidate for the CSAR job.²³

In fact, in an interview with *Inside the Air Force*, Boeing's deputy director of helicopters, Bob Sobey, spoke of CSAR-X requirement changes and pointed to April 2005 as a turning point. He said that it was during April that “things started happening in the [draft] RFP [that] made the Chinook a player” in the competition.²⁴

Although there were two helicopters that could meet the CSAR-X deployability KPP without weakening the requirement, AFSOC chose to weaken it anyway. It did so by taking a different

²⁰ Much of the information on the April and July 2005 meetings is based on notes by a DOD official involved with the CSAR-X program. POGO obtained the notes from a source who has a relationship with one of Boeing's competitors.

One person involved in the decision to make the requirement change claims it was not a result of any meeting with Boeing. This source is currently employed by a company that is involved in the CSAR-X program. The source stated that AFSOC had met repeatedly with the three competitors, Boeing, Lockheed, and Sikorsky. POGO has not seen evidence to suggest that meetings with other competitors resulted in improper requirement changes, as they did in this case.

²¹ Should read “U.S. Special Operations Command” (SOCOM), which is the joint defense command for Special Forces, instead of “Army Special Operations Command.” The Army part of SOCOM, the biggest user of rotary assets in SOCOM, does use Chinooks.

²² The U.S. Army buys the most CH-47 Chinooks, and has used the helicopter for over forty years. Army Special Operations Command recently purchased a CH-47F variant and has plans to acquire a limited quantity of the MH-47G variant over the next several years. Boeing's proposed CSAR Chinook is largely based on the MH-47G.

²³ Fabey, Michael. “Service Disputes, Political Issues Linger Over CSAR.” *Defense News*. October 10, 2005.

²⁴ Matishak, Martin. “Boeing: Senate Bill Could Give HH-47 an Advantage in Helo Competition.” *Inside the Air Force*, Vol. 16, No. 44. November 4, 2005.

tack from its previously requested change: instead of extending the length of time allowed to get the CSAR vehicle “mission ready,” AFSOC changed the readiness status the vehicle had to reach in the three-hour time period to only “flight ready.” (See Graphic C.)

The final version of AFSOC’s CDD, released in June 2005, stated:

The CSAR-X (PRV) must be capable of supporting worldwide operations (4000 nm) within 24 hours of departing home station. The aircraft must be configurable for deployment (self deployment or USAF C-5 or C-17) (T) within 3 hours and be *flight ready* within 3 hours of arrival at destination (T); (self-deployment or USAF C-5 and C-17) (O) within 2 hours and be *flight ready* within 2 hours of arrival at destination (O). (KPP) [Emphasis added] (Appendix B)

This one-word change significantly altered the deployability requirement, weakening it to such a degree that the Chinook became a viable contender.

“Mission ready” (also known as “mission capable”) is defined by the DOD as “Material condition of an aircraft indicating it can perform at least one and potentially all of its designated missions. Mission-capable is further defined as the sum of full mission-capable and partial mission-capable.”²⁵

“Flight ready” is also known as “not mission capable airworthy” and is a subcategory of another status, called “not mission-capable, maintenance.” The DOD defines not mission-capable, maintenance as “Material condition indicating that systems and equipment are not capable of performing any of their assigned missions because of maintenance requirements.”²⁶

“Not mission capable airworthy” is detailed in Air Force Instruction 21-103²⁷:

A2.4.1. NMCA – Not Mission Capable Airworthy. **The aircraft cannot do any assigned missions. The aircraft can fly** (not restricted from use). [Emphasis added] (Appendix C)

These designations are maintenance designations. According to pilots, an aircraft that is “not mission capable airworthy” must undergo a special maintenance flight called a functional check flight (FCF). Aircraft that are significantly disassembled and reassembled (for example, flight controls, engines, and/or transmissions are disconnected) require a functional check flight to ensure that they are tuned correctly to be fully or partially mission capable. The FCF may be one or more actual sorties, which are performed by specially trained and certified pilots and crews. The pilots and crews collect data during the flight to verify that maintenance has resulted in an aircraft that is acceptable for operational use. Only after the FCF can the aircraft be designated

²⁵ *Dictionary of Military and Associated Terms*. p. 351.

²⁶ *Dictionary of Military and Associated Terms*. p. 380.

²⁷ Air Force Instruction 21-103 “provides guidance and direction for managing aircraft and missile equipment throughout the Air Force.” U.S. Air Force. *Air Force Instruction 21-103*. December 14, 2005. p. 76. <http://www.e-publishing.af.mil> (Downloaded November 1, 2007) The definitions contained within the Air Force Instruction regarding mission capable are similar to those within the Joint Publication.

full or partial mission capable and released for mission tasking—in this case, combat search and rescue missions.

In other words, “flight ready” is an aircraft capable of flight, but not capable of performing the aircraft’s mission(s).

The purpose of the deployability requirement was to correct the existing mission reaction time deficiency. Because so much work has to be done to get a “flight ready” aircraft to “mission ready” status, the down-grade in post-airlift vehicle status is a serious change that could undermine the purpose of the deployability KPP.

And it is because KPPs are so essential to mission success that any changes to them have to be justified. The justifications fall into three categories,²⁸ called comments, which are defined in the Comment Resolution Matrix: they are critical, substantive, and administrative.

critical - A critical comment indicates nonconcurrence in the document, for both the O-6 and flag review, until the comment is satisfactorily resolved. [In other words, a critical comment indicates that the change to a performance requirement is a significant one, and that it must be reviewed and approved by high-level officers in the military service responsible for the program.]

substantive - A substantive comment is provided because a section in the document appears to be or is potentially unnecessary, incorrect, misleading, confusing, or inconsistent with other sections.

administrative - An administrative comment corrects what appears to be a typographical, format or grammatical error. (Appendix D)

The change to the deployability requirement, which was made late in the process, was designated an “*administrative*” alteration, but was actually a *substantive* or even *critical* change improperly made by AFSOC personnel. Because the change was labeled “administrative,” the stringent oversight process by JROC—required for substantive or critical changes to KPPs—was not triggered. A source involved in the decision to make the change claims that it was briefed to JROC and lower-level review boards, despite its (improper) designation as administrative. If it was briefed to JROC and others, it is unclear whether the change would have been highlighted and to what degree, considering its status as an administrative change.

Despite the change from mission ready to flight ready, even the finalized CDD noted that the appropriate time to measure was “time to mission ready”:

²⁸ *Instruction: Joint Capabilities Integration and Development System*. p. GL-5. According to the Instruction, “The primary objective of the JCIDS process is to ensure the joint warfighter receives the capabilities required to successfully execute the missions assigned to them. This is done through an open process that provides the JROC the information they need to make decisions on required capabilities.” (p. 2)

3.1.3. Deploy/Re-deploy Forces. *CSAR is among the most time-sensitive operations. ... Factors include time to tear-down/build-up aircraft (if required), time to mission ready, deployment footprint, ... and logistics support.* [Emphasis added] (Appendix B)

The finalized CDD further noted that “deployment shortfalls” was a key capability gap because combat rescue forces need to be “*mission ready* upon commencement of hostilities—the most likely time for aircraft losses and the period of highest demand for CSAR missions.” [Emphasis added] (Appendix B)

The deployability requirement change is also evident in other CSAR-X documents. The System Requirements Document (SRD), which is similar to the CDD but mainly addresses technical and engineering aspects of the program, was changed from “mission ready” in the May 10, 2005, draft to “flight ready” in the May 23, 2005, draft. (Appendix E and F)

Likewise, a draft copy of the Request for Proposal (RFP) from May 12, 2005, required a “mission ready” status,²⁹ whereas the final RFP released in October 2005 required a “flight ready” status. (Appendix G)

From the draft dates of these documents, it is evident that the alteration must have occurred at some point between May 12 and May 23, 2005. This timeframe also places the requirement change shortly after AFSOC’s alleged meeting with Boeing. According to an article in the *Aerospace Daily and Defense Report*:

A source familiar with CSAR operations and the Air Force special operations community, a major CSAR customer, said it appeared the KPP change occurred relatively late in the acquisition process and as an administrative alteration because special operators wanted to make sure the Chinook met the requirements.³⁰

News reports indicate that deployability wasn’t the only KPP changed by AFSOC to allow the Boeing Chinook into the competition. According to *Aviation Week and Space Technology*, Boeing admitted that a change to the speed requirement also enabled the company to compete:

Bob Carrese, Bell-Boeing’s business development director, says the Air Force “dumbed down” its speed requirements to generate a competition. [Boeing’s deputy director of helicopter programs Bob] Sobey acknowledged in his briefing the requirement went from more than 200 kt. [nautical miles per hour] to about 135 kt., opening up the opportunity of a Chinook variant.³¹

Flight International reported that the speed requirement change was evident in the December 2004 draft CDD, which required an aircraft “capable of maintaining 135 knots true air speed

²⁹ Fabey, Michael. “Wording Change in CSAR-X Proposal Raises Hackles.” *Aerospace Daily & Defense Report*. February 23, 2007.

http://www.aviationweek.com/aw/generic/story_channel.jsp?channel=defense&id=news/CSAR02237.xml
(Downloaded November 1, 2007)

³⁰ Fabey, Michael. “Wording Change in CSAR-X Proposal Raises Hackles.”

³¹ Butler, Amy. “Helos; Boeing Backs Three of Four Teams, as USAF Advocates for a Quick CSAR Replacement.” *Aviation Week and Space Technology*, Vo.163, No.11. September 19, 2005.

(KTAS)” as the threshold, and 300 KTAS as the objective. Sobey was once again quoted as saying that the change opened the way for the Chinook.³²

Although responsibility for combat rescue forces returned to ACC in early 2006,³³ the RFP had been finalized and released while the program was under AFSOC. The decreased speed and the weakened deployability status were now the KPPs. The Chinook the ACC had ruled out was back in play.

(NOT) MEETING THE REDUCED DEPLOYABILITY REQUIREMENT

Once Boeing’s Chinook was allowed into the competition, according to the GAO, it still had difficulty being even flight ready in the required time unless the Air Force gave it some leeway.

In flight demonstrations in late 2005, the Boeing team took 2 hours and 58 minutes to get the Chinook flight ready—just two minutes short of the 3 hour maximum threshold. However, Boeing’s build-up time did not include required maintenance and the installation of a necessary flight component. Despite this fact, the GAO determined that Boeing “ultimately was found not deficient” on meeting the weakened deployability KPP. (Appendix H)

The GAO wrote that “the solicitation did not provide for a pass/fail flight demonstration that would be conclusive as to whether the proposed CSAR-X met the SRD requirements.”³⁴ Also, the GAO found the Air Force position plausible that, by later installing “additional time-saving measures” on the Chinook, Boeing could then retroactively meet the flight ready deployability time requirement. (Appendix H)

However, according to POGO sources, skilled maintenance crews from the 160th Army Special Operations Aviation Regiment would normally take four hours to get their MH-47G Chinooks flight ready. (The proposed HH-47 CSAR Chinook is largely based on the MH-47G model, though, as mentioned, it is supposed to incorporate some new time-saving measures.) Prior to the late-2005 deployability demonstration, the record for assembly of Boeing’s Chinook was 3 hours 15 minutes.³⁵

The Air Force admitted during the flight demonstrations that the test aircraft may not meet the requirements, stating that it “understands that the aircraft provided for the CSAR-X flight evaluation may have to be modified” and that the flight evaluation will just “be used to support a government assessment of the offeror’s proposal risk.”³⁶

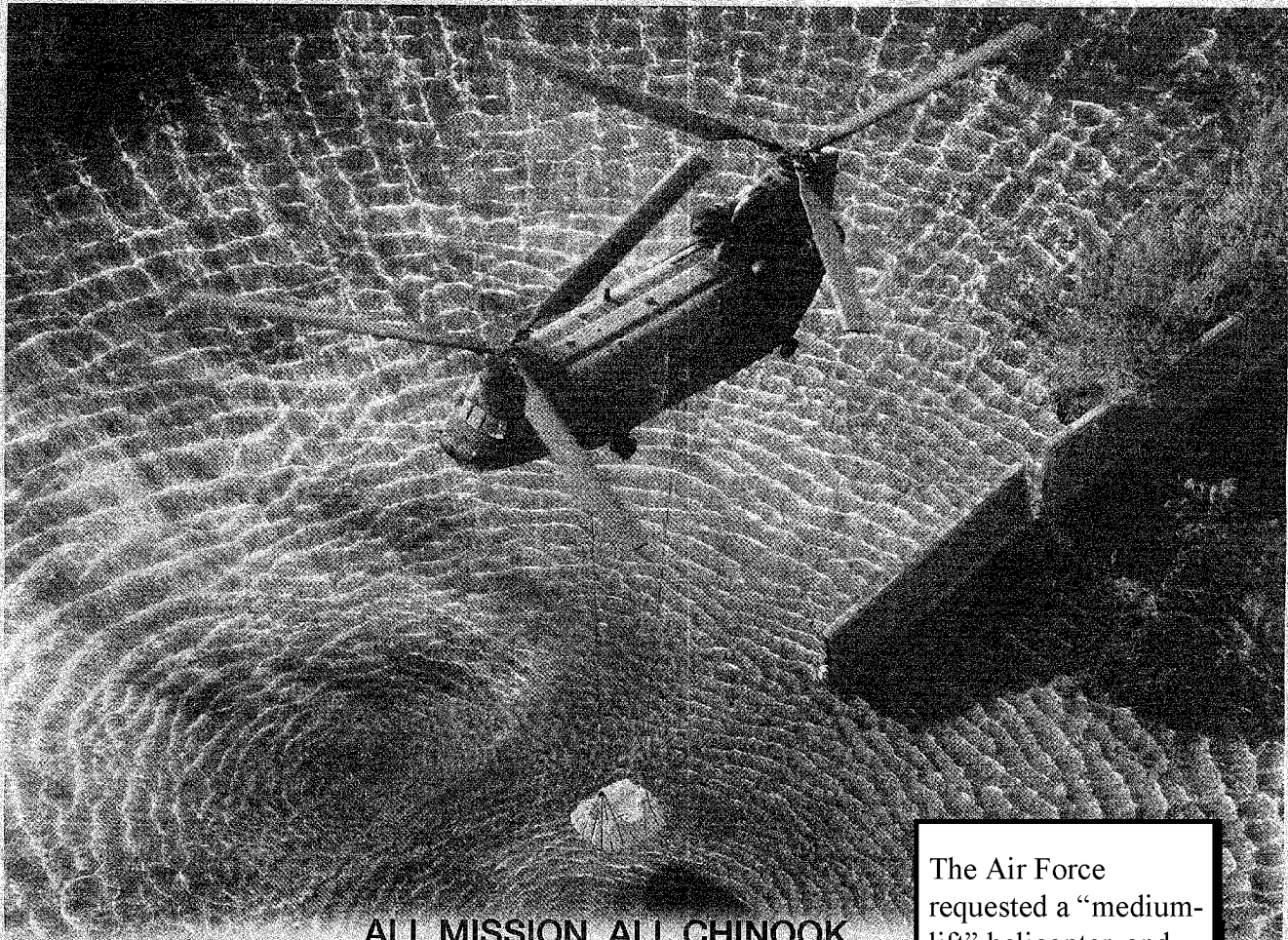
³² Trimble, Stephen. “Chinook hopes ride on CSAR bid.” *Flight International*. November 1, 2005.

³³ Christie, Rebecca. “US Air Force Separates Rescue, Commando Aircraft Roles.” *Dow Jones*, Vol. 17, No. 17. February 27, 2006.

³⁴ Government Accountability Office. *Decision: Sikorsky Aircraft Company; Lockheed Martin Systems Integration-Owego—Request for Reconsideration*, B-299145.4 (GAO Decision). March 29, 2007. p. 8.

³⁵ Trimble, Stephen. “Chinook hopes ride on CSAR bid.”

³⁶ GAO Decision. p. 8.



ALL MISSION. ALL CHINOOK.

The Air Force watered down the “mission-ready” requirement so the Chinook could compete for the CSAR-X contract.
--POGO

The Air Force requested a “medium-lift” helicopter, and rejected the “heavy-lift” option, for the CSAR mission.
--POGO

Chinook is mission-ready, whatever the mission. Its unique flexibility and heavy-lift capability make it the ideal platform to deliver unconditional support. In the heat of combat, when natural disasters occur, for humanitarian and homeland security missions. And today's Chinook is stronger and more reliable than ever. So it's ready to work, and work, and work.

Hurricane Katrina relief, 2005



This ad ran in *The Hill*, a newspaper oriented towards Congress, on November 7, 2007.

Furthermore, the GAO noted that the contractors timed themselves during the flight evaluation, but the GAO did not find a problem with that:

[T]he start and stop of the build-up demonstration was determined for each of the offerors by their maintenance crew chief, not by the government observer team.... While affording an offeror the discretion to determine the stopping time could call into question the objectivity of a demonstration, the exceptions noted in the evaluators' report on the Boeing demonstration here indicate that the evaluators nevertheless exercised independent judgment to the extent that they could detect any obvious impediments to flight readiness. [Emphasis added] (Appendix H)

Despite the plausibility that Boeing's Chinook will have time-saving measures when delivered, and after allowing that the flight demonstration was not pass-fail, the Boeing team's total build-up time still should have included the "multiple follow-up maintenance requirements" not undertaken and the installation of the item "not installed but required for flight." Otherwise, Boeing's build-up demonstration seems to have been arbitrarily stopped—at 2 hours and 58 minutes—just to make the 3 hour flight ready standard rather than when it actually would have been flight ready. This runs counter to the argument the Air Force and Boeing have made, and the GAO accepted, that the build-up time in the flight demonstration was solely made to assess risk. It would be impossible to accurately assess risk if the actual build-up time to flight ready is not known.

More fundamentally, although GAO did not believe that "the procedures followed do not furnish a basis for objecting to the evaluation of Boeing's deployability approach,"³⁷ the Director of Operational Test and Evaluation (DOT&E) weighed in on the CSAR-X program in 2005, and disagreed with the Air Force for using the flight evaluations as a way to assess the offeror's proposal risk. According to the fiscal year 2005 DOD annual test and evaluation report, the CSAR-X program had violated the fly-before-buy principle of sound acquisition by not testing production-representative aircraft. The DOT&E suggested that a more vigorous testing and evaluation regime could help the procurement, and that the Air Force should also "pursue an event-driven strategy for fielding the replacement aircraft instead of a schedule-driven one."³⁸ An event-driven strategy would allow testing of any modifications to the aircraft, as well as additional rounds of development and testing if necessary. (Appendix I)

Regardless of the concerns raised about the ability of Boeing's Chinook to meet even the weakened deployability KPP, and of the availability of two other helicopters that could meet the original KPP, the CSAR-X contract was awarded to Boeing in November 2006.

³⁷ GAO Decision. p. 8.

³⁸ Matishak, Martin. "DOT&E CSAR Replacement Program Violates Sound Acquisition." *Inside the Air Force*, Vol. 17, No. 4. January 27, 2006.

THE MULTIPLE REASONS GIVEN FOR THE KPP CHANGE

The parties involved in the CSAR-X program have offered several rationales for the change to the deployability requirement. In an *Aerospace Daily & Defense Report* article published February 23, 2007, sources familiar with CSAR-X indicated that the change was made because “special operators wanted to make sure the Chinook met the requirements.”³⁹

A subsequent article in the same publication added that Air Force special operations officials “wanted to field a new aircraft more quickly and thought there was too much risk involved in developing other platforms... .”⁴⁰

In a March 2007 press conference, Kenneth Krieg, Undersecretary of Defense for Acquisition, Technology and Logistics (AT&L), echoed the Air Force’s emphasis on a speedy procurement for the CSAR-X program. Portraying the decision as a trade-off between replacement time and capability, Krieg stated:

what was clear about CSAR-X was *the need to hold schedule*. The legacy aircraft were aging rapidly, and the need to get replacement into the field—and so we debated—actually, we had a concept decision. We brought the requirements guys in, the resource guys, and the acquisition guys. And it was one of the more intense early discussions around trade space.

And what we determined was that *schedule is more important than ultimate capability*, and that’s what led to a block zero, block 10 approach and that block 10 was going to have to stand on its own merits later. But the desire to be able to field a program in a relative amount of time with relative certainty with short development cycles was clearly a desire because of the need to get new aircraft out there. And so you had to look at cases where you had high technology readiness levels, where your integration risks were less.⁴¹ [Emphasis added]

To be sure, the conflicts in Iraq and Afghanistan have increased the wear-and-tear on CSAR’s existing HH-60 Pave Hawk fleet, placing added pressure on the CSAR-X procurement process. In that context, favoring a replacement vehicle that is already in production and that has extensive combat history could make sense. What doesn’t make sense, however, is favoring that vehicle if it cannot perform the mission to the required standards. And it is counter-productive to weaken a top-priority CSAR mission requirement just so the existing vehicle can be used.

Furthermore, when questioned by POGO, a source involved in making the deployability requirement change offered completely different reasons for the change. The source had initially told POGO that the change was ordered to increase competition by allowing the Chinook to enter

³⁹ Fabey, Michael. “Wording Change in CSAR-X Proposal Raises Hackles.”

⁴⁰ Fabey, Michael “USAF Made KPP Change to Keep CSAR-X on Schedule.” *Aerospace Daily & Defense Report*, Vol. 223, Iss. 56. September 19, 2007.

⁴¹ U.S. Department of Defense: Office of the Assistant Secretary of Defense. “DoD News Briefing with Undersecretary of Defense for Acquisition, Technology and Logistics Mr. Ken Krieg from the Pentagon.” <http://www.defenselink.mil/transcripts/transcript.aspx?transcriptid=3905>. (Downloaded November 1, 2007)

the race. The source later stated, however, that the “mission ready” requirement was too difficult to define and test, so the requirement was changed to the more clearly defined “flight ready” status.

Boeing HH-47 Chinook program manager Rick Lemaster, responding to a question by POGO on deployability at a media briefing in September 2007, also voiced the alleged difficulties with testing “mission ready.” He argued that most CSAR missions are unknown beforehand, and that it would be impossible to test for every scenario. Yet that line of argument ignores the DOD’s definition of “mission capable,” which states that the vehicle “can perform *at least one* and potentially all of its designated missions.”⁴² [Emphasis added]

Also, conversations with two former directors of DOD’s Operational Test and Evaluation office, Tom Christie and Phillip Coyle (now a senior advisor at the Center for Defense Information), dispelled the reasoning that “mission ready” is difficult to test. According to Christie and Coyle, while there is some truth to the assertion that not every scenario can be known beforehand, the essential elements needed for the vehicle’s primary mission could be determined and the time needed to prepare the vehicle for mission ready could be gauged. The final CDD repeatedly states that the primary mission of the CSAR-X is the recovery of isolated personnel from hostile or denied territory. (Appendix B)

These attempts to justify the change to the deployability KPP further undermine its designation as “administrative”—a change that merely corrects faulty grammar or typographical mistakes.

In addition to the above reasons, another possible reason for the change is pressure from the Office of the Secretary of Defense (OSD). After JROC had approved the revised CSAR-X program for the next stage in the acquisition process, OSD officials who had helped set up the April 2005 AFSOC meeting with Boeing were upset with the program’s direction. In a July 2005 meeting,⁴³ the OSD officials attempted to pressure the Air Force to forego a full and open CSAR-X competition and instead award a sole-source contract to Boeing for its MH-47G Chinooks. An Air Force Aeronautical Systems Center officer involved with managing the CSAR-X procurement program asked for the OSD’s request in writing. The OSD officials refused.

According to POGO sources, OSD officials had continued to delay the program through multiple reviews. For instance, OSD officials inserted language into the RFP allowing OSD to veto any Air Force choice of vehicle. The Air Force fought them on the issue and, eventually, won, but the reviews wasted time, further delaying the procurement process. Some of this OSD interference has received coverage in the defense trade press. For instance, “helicopter manufacturing officials” told *Defense News* that a clause allowing the DOD to veto the Air Force’s CSAR-X selection was removed from the RFP at the last minute.⁴⁴

⁴² *Dictionary of Military and Associated Terms*. p. 356.

⁴³ Much of the information on the April and July 2005 meetings is based on notes by a DOD official involved with the CSAR-X program. POGO obtained the notes from a source who has a relationship with one of Boeing’s competitors.

⁴⁴ Fabey, Michael. “Service Disputes, Political Issues Linger Over CSAR.”

In 2006, OSD made another attempt to steer the program by studying three possible mixed fleets of helicopters for CSAR, one of which included Chinooks. After interviewing individuals familiar with OSD's portfolio review,⁴⁵ and after reviewing numerous defense trade press articles, it is evident to POGO that OSD was interested in procuring a helicopter already in the military's inventory in order to minimize the risk and reduce the average procurement cost of a Department-wide platform. Using equipment for a new mission that is already in inventory for another is generally a good thing—unless that equipment is not able to effectively perform the new mission.

An *Inside the Air Force* article on the study reported that the mixed fleets were vastly different from the Air Force's acquisition strategy because they did not include two out of three of the main competitors (Sikorsky's S-92 and Lockheed's US-101) in the ongoing Air Force CSAR-X competition:

OSD's program analysis and evaluation shop this fall conducted an additional study to look beyond an Air Force-led 2001 CSAR analysis of alternatives, according to a draft Pentagon presentation that was slated to be given to DOD acquisition officials March 23. *Inside the Air Force* this week obtained a copy of the draft presentation, which carries a "draft working papers" stamp.

The recent study, which wrapped up last month, looked at maintaining the existing fleet of HH-60G Pave Hawks; a mixed fleet of Pave Hawks and some number of the Boeing-made HH-47 helicopter, an Air Force-specific version of its CH-47 Chinook; and another mixed fleet composed of the HH-60G and the V-22 Osprey, the draft briefing states.⁴⁶

A defense official told *Inside the Air Force* that all three mixed fleets would fail to meet the Air Force's requirements. The Pentagon's study excluded Lockheed Martin's EH-101 helicopter and Sikorsky's HH-92 helicopter, despite the fact that both were in the CSAR-X competition. Several days after its initial article, *Inside the Air Force* followed with a report that top Air Force officials had defeated OSD plans for a new, mixed fleet acquisition strategy.⁴⁷

⁴⁵ An OSD investment portfolio review is a loosely-defined high-level DOD study of a program in context with other similar programs across the military services. The CSAR-X program was the first to go through an OSD investment portfolio review.

⁴⁶ Matishak, Martin. "PA&E Study Examined Several Alternative CSAR-X Mixed Fleet Scenarios." *Inside the Air Force*, Vol. 17, No. 12. March 24, 2006.

⁴⁷ Matishak, Martin and John T. Bennett. "Pentagon's New 'Concept Decision Review' Affirms Air Force CSAR-X Plans." *Inside the Air Force*, Vol. 17, No. 13. March 31, 2006.

CONCLUSION

The search and rescue forces' ability to deploy in-theater before combat operations and to rapidly respond when rescuing isolated personnel is the most vital component of the CSAR mission. The importance attached to deployability has been underscored by past combat experience, Joint Doctrine and Air Force Doctrine documents, the 1997 Air Force CSAR Mission Needs Statement, and the 2002 Combat Rescue Analysis of Alternatives. As a result, the Joint Requirements Oversight Council approved deployability as a key requirement in the CSAR-X selection process.

Despite the vital role rapid CSAR deployability plays in mission success, AFSOC officials significantly weakened the deployability requirement in the CDD and the final RFP. According to POGO sources, the requirement change was made shortly after a meeting between AFSOC and Boeing officials, and under pressure from OSD to select the HH-47 Chinook. Evidence also points to a speed requirement change benefiting the Chinook during the same time period. The requirement changes ultimately allowed Boeing to enter the competition.

Senior Air Force officials had instructed AFSOC officials, prior to the deployability requirement change, that such a significant change must undergo the standard scrutiny and oversight process before approval. Yet AFSOC personnel opted to improperly label the change as administrative, which does not require the heightened oversight of a substantive or critical change. The nature of the change (from "mission ready" to "flight ready"), its impact on the selection process, and the subsequent explanations for the change all indicate that it did not qualify as "administrative."

POGO would like to emphasize that none of these findings allege corruption or illegal action on the part of Air Force officials or the CSAR-X competitors. POGO's findings primarily point to failures in the acquisition process itself and possible violations of defense doctrine.

Ultimately, the ability of all three competitors to meet some of the key performance parameters has been called into question, according to discussions with former military personnel involved in the CSAR-X program. Yet the last-minute, furtive change to the deployability requirement seems not only to be in violation of DOD policy, but also to threaten the effectiveness of the combat search and rescue mission. Considering the size of the procurement—\$10-15 billion dollars—and search and rescue mission's importance to the men and women in combat, any requirement failure is unacceptable. Even three hours is a lifetime to soldiers and pilots stranded deep behind enemy lines.

RECOMMENDATIONS

1. The DOD IG should investigate the deployability KPP change. Questions to raise include: Was the deployability KPP change made appropriately? Should it have been designated a substantive or critical change rather than an administrative change? Did it receive appropriate scrutiny in the JROC requirements approval process? Were other requirement changes made in response to Boeing or other offerors' comments? Were those changes made appropriately? Were conflict of interest or ethics laws violated?
2. The CSAR-X program should be re-competed with maximum transparency.
3. The DOD's Operational Test and Evaluation Directorate (DOT&E) should be brought into the process to assess offerors' proposal risks, as well as to test and evaluate production-representative aircraft.

ACRONYMS AND GLOSSARY

ACC	Air Combat Command
AFDD	Air Force Doctrine Document
AFMC	Air Force Materiel Command
AFROC	Air Force Requirements Oversight Council
AFSOC	Air Force Special Operations Command
AOA	Analysis of Alternatives
AT&L	Acquisition, Technology and Logistics
CDD	Capability Development Document
CSAR	Combat Search and Rescue
CSAR-X	Combat Search and Rescue vehicle procurement program
DOT&E	Director of Operational Test and Evaluation
FCF	Functional Check Flight
ICD	Initial Capabilities Document
JCIDS	Joint Capabilities Integration and Development System
JROC	Joint Requirements Oversight Council
KPP	Key Performance Parameter
KTAS	Knots True Air Speed
MNS	Mission Needs Statement
NMCA	Not Mission Capable Airworthy
OEF	Operation Enduring Freedom
OSD	Office of the Secretary of Defense
PR	Personnel Recovery
PRV	Personnel Recovery Vehicle
RFP	Request for Proposals
SEAL	Sea, Air and Land
SOCOM	Special Operations Command
SRD	System Requirements Document
TPFDL	Time Phased Force Deployment List

Air Combat Command

Formed in 1992, Air Combat Command is one of ten major Air Force commands. Its mission is to be the primary force provider of combat airpower for all U.S. warfighting commands. It also oversees the DOD's primary combat search and rescue forces.

Air Force Doctrine Document

Official statement of beliefs and warfighting principles that applies to all airmen and guides military operations. This doctrine is authoritative, but not directive, thus allowing for a degree of discretion on the part of commanders in particular situations. It also is consistent with and complements the Joint Doctrine for all U.S. military forces.

Air Force Materiel Command

Formed in 1992, Air Force Materiel Command is one of ten major Air Force commands. Its mission is to equip the Air Force with effective weapon systems and ensure that they are ready for combat. This is accomplished through research, development, testing, evaluation, and providing acquisition management services and logistics on weapon systems.

Air Force Requirements Oversight Council

The oversight body within the Air Force tasked with reviewing and approving Air Force program and acquisition documents.

Air Force Special Operations Command

Formed in 1990, Air Force Special Operations Command is one of ten major Air Force commands. It is the air component of the unified U.S. Special Operations Command and provides Air Force Special Operations Forces (SOF) for regional commands. Its primary mission areas are shaping the battlefield, information operations, precision engagement, SOF mobility, agile combat support, and aerospace interface. From 2003 to 2006, AFSOC also oversaw the DOD's primary combat search and rescue forces.

Analysis of Alternatives

The evaluation of alternative systems to meet a mission capability. It assesses the advantages and disadvantages of each system and offers recommendations. An AoA is typically initiated in response to a Mission Needs Statement and occurs early in an acquisition process.

Acquisition, Technology and Logistics

The Undersecretary of Defense office within the Defense Department that oversees matters related to defense acquisitions and technologies.

Capability Development Document

A document that defines the requirements and attributes of a system needed to meet a specific capability. It is typically completed after an AoA in the acquisition process. The final document must receive approval from the Joint Requirements Oversight Council.

Combat Search and Rescue

Mission designed to rescue isolated personnel in hostile territory and combat situations. The Air Force Air Combat Command maintains the U.S. military's primary combat search and rescue forces, although each military branch possesses some independent rescue forces.

Director of Operational Test and Evaluation

The principal staff assistant and senior advisor to the Secretary of Defense for all matters related to operational testing and evaluation of weapons systems and acquisitions. The Director provides analysis on the effectiveness of these systems to the Secretary of Defense, the Undersecretary of Defense for AT&L, and Congress.

Functional Check Flight

A special maintenance flight for "not mission capable airworthy" aircraft where specially trained pilots assess the performance of the aircraft and ensure that it is capable of flying full or partial missions.

Initial Capabilities Document

A document that replaced the Mission Needs Statement in the initial phase of an acquisition process.

Joint Capabilities Integration and Development System

The system used by the Chairman of the Joint Chiefs of Staff and the Joint Requirements Oversight Council to identify, assess, and prioritize joint military capability needs as required by law. Capabilities are determined by assessing requirements needed to accomplish the mission.

Joint Requirements Oversight Council

A Council composed of the Vice Chiefs from each military branch. The Council is tasked with reviewing, validating, and approving the key parameters of an acquisition at the beginning of an acquisition process, after each milestone, and at the request of the Undersecretary of Defense for AT&L.

Key Performance Parameter

The elements most critical or essential to effective military capability. These are typically defined in a Capability Development Document, and must be validated by the Joint Requirements Oversight Council.

Knots True Air Speed

The actual speed of an aircraft, determined by correcting the indicated air speed for the effects of air density and temperature.

Mission Needs Statement

A document describing the materiel or non-materiel approach needed in order to correct a specific capability gap. It sometimes results in a Capability Development Document.

Navy SEAL Forces

The elite Special Operations Forces (or Special Forces) of the U.S. Navy.

Not Mission Capable Airworthy

Designation contained in Air Force Instruction 21-103 indicating that an aircraft can fly yet is unable to conduct missions until maintenance and a test flight are performed.

Offeror

Private entity that submits a procurement proposal to a government agency in response to a Request for Proposals.

Operation Enduring Freedom

U.S. and British military operations launched in Afghanistan on October 7, 2001, in response to the terrorist attacks of September 11, 2001. Combat forces are generally under the direction of U.S. Central Command and target Al Qaeda and Taliban forces.

Office of the Secretary of Defense

The principal staff in the Defense Department responsible for policy, planning, resource management, and program evaluation. It includes the immediate offices of the Secretary, the Deputy Secretary, Assistant Secretaries, and Undersecretaries of Defense.

Personnel Recovery

An alternate term for combat search and rescue—the rescue of isolated soldiers from hostile territory.

Personnel Recovery Vehicle

The follow-on aircraft to the HH-60 Black Hawk helicopter tasked with rescuing downed aircrews and isolated personnel during combat operations. The title has since been changed to CSAR-X.

Request for Proposals

A government solicitation for prospective contractor proposals that defines government requirements for an acquisition program.

Special Operations Command

The DOD's unified combat command formed in 1987 and responsible for overseeing the Special Forces from every military branch. SOCOM acts as the Joint Command Center when multiple branch Special Forces operate in tandem.

System Requirements Document

A document that defines system requirements needed in order to meet a specific capability. It's similar to the Capability Development Document, but focuses more on the technical and engineering aspects of the system. The SRD is part of the acquisition process, and is reviewed by the Joint Requirements Oversight Council.

Time Phased Force Deployment List

Tool used by unified commanders to request forces in support of planned operations. The TPFDL relies on factors such as strategic airlift, sustainability, reserves, and available reaction time.