



United States Government Accountability Office
Washington, DC 20548

December 15, 2005

The Honorable John W. Warner
Chairman
The Honorable Carl Levin
Ranking Minority Member
Committee on Armed Services
United States Senate

Subject: *Unmanned Aircraft Systems: Global Hawk Cost Increase Understated in Nunn-McCurdy Report*

To provide for oversight of cost growth in DOD major defense acquisition programs, Congress passed legislation, commonly referred to as Nunn-McCurdy, which requires DOD to notify Congress when a program's unit cost growth exceeds (or breaches) the latest approved acquisition program baseline by at least 15 percent.¹ If the cost growth has increased at least 25 percent over the baseline, the Secretary of Defense must certify to Congress that (1) the program is essential to national security; (2) no alternatives exist which will provide equal or greater military capability at less cost; (3) new program acquisition or procurement unit cost estimates are reasonable; and (4) the management structure is adequate to control unit cost.

On April 13, 2005, the Acting Secretary of the Air Force formally notified Congress that the procurement unit cost of the Global Hawk had increased 18 percent over the baseline estimate. As you requested, we are in the process of reviewing the acquisition strategies and requirements for

¹10 U.S.C. 2433 establishes the requirement for unit cost reports. The requirement became permanent law in 1982 in Public Law 97-252, section 1107. Two measures are tracked: procurement unit cost (total funds programmed for procurement divided by the total number of fully configured items to be procured) and program acquisition unit cost (total cost of development, procurement, and system-specific military construction divided by the number of fully configured end items to be produced). To eliminate the effects of inflation, costs are expressed in constant base year dollars.

several unmanned aircraft systems,² including the Global Hawk. While that work will not be completed for some months, we are issuing this correspondence because we have developed important information on the accuracy and completeness of the Air Force's reporting of the Global Hawk unit cost increase that needs attention.

Summary

The Air Force's Nunn-McCurdy report to Congress understates the unit cost increase in that it does not include \$400.6 million in known additional procurement costs.³ Including these costs results in procurement unit cost growth of 31 percent over the current baseline versus the 18 percent reported by the Air Force. In our view, this larger unit cost increase should have been reported to Congress with the required certification by the Secretary of Defense. The additional costs not included in the Air Force's reporting are for the purchase and installation of sensors, enhancements to communications equipment and ground stations, parts procurement, and other items required to achieve the system's initial, full-up capability. Air Force Global Hawk program budget documents included these costs before submitting the April 2005 Nunn-McCurdy notice to Congress and before the March 2005 publication of the annual *Selected Acquisition Report*.⁴ However, these costs were removed after the program office budget reporting documents were submitted to DOD offices in the Pentagon. Office of Secretary of Defense (OSD) officials explained that these costs had been recategorized as modifications that have historically been excluded from baseline measurements. We believe these costs

²Rather than referring to unmanned aerial vehicles, we are adopting DOD's new parlance of unmanned aircraft systems. DOD recently began changing its references to better reflect that the air vehicle itself is part of a larger system (e.g. payloads, ground stations, and communication equipment) and to reflect the Federal Aviation Administration's classification of unmanned vehicles as aircraft.

³This and other costs are expressed in terms of base year 2000 dollars to facilitate unit cost comparisons across years. The total cost expressed in then-year, budgeted dollars for items not included in the unit cost report is \$487.6 million.

⁴For the purpose of congressional oversight and decision making, DOD is required by law to report to Congress the unit costs for each major defense acquisition program. DOD reports this unit cost for both the current budget estimate and the most recent acquisition program baseline, which describes the cost, quantity, schedule, and performance goals of a program. DOD reports these comparisons in a *Selected Acquisition Report*. 10 U.S.C. 2432 establishes the requirements for these reports. Another statute, 10 U.S.C. 2433, establishes the requirement for unit cost reports. If certain program cost increase thresholds are exceeded (known as unit cost or Nunn-McCurdy breaches), DOD is required to report to Congress and, if applicable, certify the program to Congress.

should have been reported since they are needed to achieve the system's required capabilities.

We are recommending that the Office of the Secretary of Defense revise the Global Hawk *Selected Acquisition Report* and take the necessary actions to comply with the Nunn-McCurdy legislation for reporting and certification.

Reasons for Nunn-McCurdy Cost Breach

The Air Force's April 2005 letter to Congress stated that the 18-percent breach was primarily the result of increasing aircraft capacity to accommodate requirements for a more sophisticated, integrated imagery and signals intelligence sensor suite. This letter refers to the program restructuring of the Global Hawk program in 2002 that added a new, larger, and more capable aircraft (designated the RQ-4B). Before 2002, the Global Hawk program had planned to procure only the smaller version now designated the RQ-4A. The Air Force letter explains that the final design of the RQ-4B required more extensive changes to the fuselage, tail, and landing gear than expected when the new, larger Global Hawk system was baselined in 2002. The December 31, 2004, *Selected Acquisition Report* showed the reasons for unit cost increases as:

- requirements growth,
- increased sensor cost,
- deferred aircraft purchases,
- increased costs of airframe,
- increased support requirements and initial spares, and
- increased government costs for acceptance tests, design changes, and mission support.

Additionally, program officials told us that they originally expected substantial commonality between the A and B models but, as designs were finalized and production started, it was apparent that the B model was more different, more complex, and more costly than anticipated.

Costs Not Included in Global Hawk Nunn-McCurdy Notice to Congress

Program officials said the unreported costs (\$400.6 million) are for items needed to bring the RQ-4B to a common configuration and to meet warfighter requirements. Such items as signals intelligence sensors and ground station enhancements will be retrofitted on aircraft and ground equipment after they have left the production line. Development and procurement cost increases and schedule slips have resulted in numerous adjustments to funding plans that included deferring some items to later in the program and reclassifying costs. For example, officials originally

planned to procure 25 signals intelligence sensors and install them on the aircraft production line to meet the warfighter's requirements for fully configured multi-intelligence aircraft. These costs were budgeted for last year in the aircraft procurement weapon system account and were included in the December 2002 acquisition program baseline. Because of cost pressures and schedule changes, officials moved the cost for 10 of these sensors—\$122.6 million worth—to a different funding account used to modify aircraft after they are delivered. The new plan is to install these 10 sensors in aircraft after they have left the production line. Because historical DOD practice does not include modifications in the program baseline, funding for these sensors and the other modification items were excluded for the Nunn-McCurdy reporting purposes.

OSD officials responsible for the *Selected Acquisition Reports* told us, historically, modification costs have not been included in the calculations in these reports to Congress. This is because modification costs were typically used to add new capabilities or make changes after a fully capable weapon system had been delivered. However, in the case of the Global Hawk, the modification costs for the sensors and other items were intended to deliver the full initial capability and, in our view, should have been included in the unit and total cost reporting to Congress. In response to our inquiry, OSD officials recently initiated a review of policies and practices to evaluate Global Hawk reporting and also to determine whether this issue affects other acquisition programs. OSD and Air Force officials said a factor contributing to uncertainty is that DOD policies and practices have been increasingly streamlined to provide less detailed guidance and may need to be updated to keep pace with new business practices such as evolutionary and spiral development.

As shown in table 1, the impact of adding \$400.6 million for modification costs would have resulted in a breach of 31 percent over baseline and required the Secretary to certify the program to Congress. This additional cost would raise the average procurement cost for each aircraft to \$74.8 million compared with \$57.0 million estimated in the December 2002 baseline. We further note that adding modification costs would also result in a breach of program acquisition unit cost growth of almost 19 percent compared with the 11 percent reported in the Selected Acquisition Report.

Table 1: Global Hawk Procurement Unit Cost (in millions of dollars)

	Baseline estimate (Dec 2002)	Program estimate (Mar 2005)	Percent change reported to Congress	Retrofit costs not reported	GAO estimate including retrofit costs	Percent change, including retrofit costs
Procurement Cost	\$2,904.6	\$3,416.1		\$400.6	\$3,816.7	
Quantity	51	51			51	
Unit cost & Change	\$57.0	\$67.0	18%		\$74.8	31%

Note: Costs expressed in base year 2000 dollars.

Source: Air Force (data); GAO (analysis).

The Air Force is in the midst of rebaselining the cost and schedule for acquiring the Global Hawk system. The Defense Acquisition Board is scheduled to review the new baseline in November 2005. This will be the program's fourth baseline since the original baseline at system development start in March 2001.

Conclusions

The *Selected Acquisition Reports* and unit cost reporting requirements are intended to inform Congress of the costs to develop and procure weapon systems and should accurately include all costs necessary to deliver the full capability stipulated in acquisition and requirements documents that support the business case for new weapon system development programs. The Global Hawk program does not meet this standard and therefore Congress does not have accurate and complete information about this program with which to make decisions on current and future budget requests.

Recommendations for Executive Action

We recommend that the Secretary of Defense direct the Under Secretary of Defense for Acquisition, Technology, and Logistics to revise the Global Hawk report and take the necessary actions to comply with the Nunn-McCurdy legislation for reporting and certification.

Agency Comments

In written comments on a draft of this report, DOD partially concurred with our recommendation. DOD agreed that retrofit costs for the 10 signals intelligence sensors and one radar sensor were previously in the approved baseline and should have been included in the unit cost reporting. Including these items would have increased unit costs by 22.5 percent over the baseline versus the 18 percent reported to Congress and in the annual *Selected Acquisition Report*. DOD did not agree with us that funding for the other remaining modifications was also reportable, maintaining that these items meet the historical reporting practice for

modifications to provide more performance capability than defined in the original approved acquisition program baseline. DOD's written comments also said that OSD will review the Department's acquisition reporting policies and practices and determine what changes, if any, are necessary to keep pace with new business practices such as evolutionary acquisition and will provide additional guidance to clarify current practices regarding weapon system modification and retrofit accounting.

We continue to believe that Global Hawk unit procurement cost increase exceeds the 25-percent threshold established in law. Besides the costs for sensors and the radar, we believe other major modification costs identified in our report should have been included in unit cost reporting because they represent the cost to deliver capability originally agreed to in the acquisition program baseline. For example, other items not reported by DOD included \$108 million in funding for technical solutions needed to meet required warfighter capabilities in the operational requirements document for communicating with ground forces. Furthermore, we understand that the Air Force plans to notify Congress that unit procurement costs for the Global Hawk program have increased over the 25-percent threshold and will initiate the certification process required by Nunn-McCurdy. Finally, we are pleased that DOD plans to review acquisition and accounting policies and practices concerning modifications to determine if changes are needed. We believe that keeping policy and practice aligned will facilitate more accurate tracking and reporting and allow for greater oversight for major acquisition program baselines and unit costs over time.

Scope and Methodology

This report is the result of a broader ongoing review of the acquisition strategies being applied on Unmanned Aircraft Vehicle programs, including Global Hawk, Predator, and Joint Unmanned Combat Air Systems. To examine the accuracy and completeness of the Air Force's Nunn-McCurdy report on Global Hawk, we obtained budget and programmatic data and compared changes in data from prior periods. This comparison showed that modification dollars were excluded in calculations used to prepare the final Nunn-McCurdy report and the annual Selected Acquisition Report. We discussed this analysis with Air Force Global Hawk program officials at Wright-Patterson Air Force Base, Ohio. We also discussed our analysis of Global Hawk and Nunn-McCurdy reporting and policy with officials of the Office of Secretary of Defense, Under Secretary for Acquisition, Technology, and Logistics. We discussed Global Hawk requirements with Air Combat Command officials at Langley Air Force Base, Virginia. We conducted our work from September through

November 2005 in accordance with generally accepted government auditing standards.

We are sending copies of this letter to the Honorable Donald H. Rumsfeld, Secretary of Defense, and Michael W. Wynne, Secretary of the Air Force. We will make copies available to other interested parties upon request. The letter is also available at no charge on the GAO Web site at <http://www.gao.gov>.

Please contact me at (202) 512-4841 if you or your staff have any questions. Contact points for our offices of Congressional Relations and Public Affairs may be found on the last page of this report. Other major contributors to this letter were Mike Hazard, Assistant Director; Bruce Fairbairn; Rae Ann Sapp; and Charlie Shivers III.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Michael J. Sullivan", with a stylized flourish at the end.

Michael J. Sullivan, Director
Acquisition and Sourcing Management

Enclosure

Enclosure



ACQUISITION,
TECHNOLOGY
AND LOGISTICS

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DEC 02 2005

Mr. Michael J. Sullivan
Director, Acquisition and Sourcing Management
U.S. Government Accountability Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Sullivan:

This is the Department of Defense (DoD) response to the GAO draft report, 'UNMANNED AIRCRAFT SYSTEMS: Global Hawk Cost Increases Understated in Nunn-McCurdy Report,' dated December 15, 2005 (GAO Code 120462/120498/GAO-06-222R).

The DoD partially concurs with the report's recommendation for executive action. The rationale for the DoD's position is enclosed.

The Department appreciates the opportunity to comment on the draft report. For further questions concerning this report, please contact Dyke Weatherington, Deputy, Unmanned Aircraft Systems Planning Task Force, 703-695-6188.

Sincerely,

Nancy L. Spruill
Director
Acquisition Resources and Analysis

Enclosure:
As stated



**GAO DRAFT REPORT - DATED NOVEMBER 4, 2005
GAO CODE 120462/120498/GAO-06-222R**

**“UNMANNED AIRCRAFT SYSTEMS: GLOBAL HAWK COST INCREASES
UNDERSTATED IN NUNN-MCCURDY REPORT”**

**DEPARTMENT OF DEFENSE COMMENTS
TO THE RECOMMENDATIONS**

RECOMMENDATION 1: The GAO recommended that the Under Secretary of Defense (Acquisition, Technology and Logistics) revise the Global Hawk report and take the necessary actions to comply with the Nunn-McCurdy legislation for reporting and certification. (p. 4/GAO Draft Report).

DOD RESPONSE: Partial Concur. The current reporting for the Global Hawk program is consistent with the long standing Department practice to exclude field modification costs in Selected Acquisition Reports (SARs) and Nunn-McCurdy unit cost calculations. Historically, modification activities upgrade program capability above that defined in the approved Acquisition Program Baseline (APB). The GAO does, however, make a legitimate point that some of the modification costs, specifically those costs for 10 signals intelligence (SIGINT) sensors, were previously in the APB and moving these costs to the modification category did not provide a completely accurate presentation of the current program financial status. These costs were moved to the modification category as a result of the Department’s decision to reduce concurrence in the Global Hawk program, a recommendation that GAO made in a previous report.

The GAO assertion that the Nunn-McCurdy notification reported by the Air Force in April 2005 should have been calculated at 31%, however, overstates their position. The GAO identified 10 SIGINT sensors that were once calculated in the APB and then moved to the modification category (they did not identify one radar sensor that fell into this category). However, the GAO included the entire modification account in their calculation, most of which is for modifications that meet the historical reporting criteria. Based on the GAO assessment, the unit cost report accounting should have included an additional 10 SIGINT sensors, and one radar sensor only. The impact on unit cost increase would have been 22.5%, not 31%.

The Department is committed to full and open disclosure for all attributes of DoD acquisition programs. The Department will, therefore, report in the upcoming Selected Acquisition Report the unit cost calculations against the approved APB, including applicable modification costs.

OSD will conduct a review of the Department’s acquisition reporting policies and practices regarding modifications. After further investigation and review, the Department will determine what changes, if any, need to be made to keep pace with new business practices such as evolutionary development. At a minimum, additional guidance will be

provided to clarify the current practice regarding weapon system modification and retrofit accounting.

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