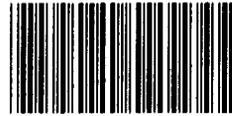


May 1992

STRATEGIC MISSILES

ACM Program, Opportunity for Additional Savings



146491

**National Security and
International Affairs Division**

B-240467

May 6, 1992

The Honorable Richard B. Cheney
The Secretary of Defense

Dear Mr. Secretary:

We have been evaluating the status of the Advanced Cruise Missile (ACM) program's acquisition strategy and manufacturing problems. While our evaluation was underway, the President announced that production of ACM's would be ended. This report addresses certain issues we believe should be considered as the Air Force proceeds with plans to complete the program.

Results in Brief

In January 1992, citing the dissolution of the Soviet Union and the lower nuclear threat, the President announced an end to ACM production. To implement the President's decision, the Department of Defense (DOD) issued plans to cease procurement at 640 missiles, including the purchase of 120 missiles authorized for fiscal year 1992. However, considering the changes to the threat and the uncertainties of the size and nature of the U.S. bomber force, the additional 120 ACMs may not be needed. Actions taken by the Air Force since we completed our review indicate that its plan is to buy no more than 520 ACMs. However, as of April 7, 1992, the Office of the Secretary of Defense had not concurred in this plan.

A major consideration by the Air Force in limiting procurement to 520 missiles was its need to find a source of funds to cover prior year ACM contract funding shortfalls. The shortfalls, estimated at \$121.2 million, were due mainly to costs incurred when deliveries were suspended while design and quality problems were resolved. In early April 1992, the Air Force, having determined that sufficient prior year funds were not available to cover the shortfalls, partially terminated the contract for fiscal year 1987 and 1988 missiles. The Air Force immediately awarded a new letter contract to continue the work that was being done under the partially terminated contract and used funds appropriated for fiscal year 1992. We are concerned about the potential for cost increases, as well as the legal and programmatic issues that may arise from their actions. We plan to continue to review these matters.

Background

The Air Force began acquiring Air Launched Cruise Missiles (ALCM) in the early 1980s to increase the deterrent value of U.S. nuclear forces and, if necessary, to attack military, economic, and leadership targets. However, the Air Force was concerned that the Soviet air defense systems projected for the 1990s would be able to destroy the ALCM and the bombers carrying them. Because of this, the Air Force began developing the ACM and reduced its planned procurement of ALCMs. The ACM was designed to have better accuracy, greater standoff range, and a lower probability of being detected than the ALCM.

In 1985, the Air Force began acquiring the first of 1,461 ACMS from General Dynamics, Convair Division. The planned quantity was reduced in 1991 to 1,000 because of bomber force structure changes and budgetary constraints. As a result of the President's January 1992 announcement, DOD further reduced the total to 640 ACMS.

General Dynamics experienced significant development and production problems, leading the Air Force to select McDonnell Douglas Missile Systems Company as the second production source in 1987. As of March 1992, the Air Force had a total of 520 missiles on contract, 420 from General Dynamics and 100 from McDonnell Douglas. Missile deliveries from General Dynamics were stopped in 1989 and again in 1991 to allow the contractor to resolve serious design and quality problems.

The Congress authorized and appropriated \$522 million, \$88.3 million in fiscal year 1991 and \$433.7 million in fiscal year 1992 to buy 120 missiles. If procured, this would bring the total number of ACMS to 640. Because of delays in negotiating contracts for ACMS ordered in previous years, the Air Force has not yet issued a request for proposal for these missiles. The Air Force planned to issue a request for proposal in January 1992, but the President's announcement delayed its release.

Although a request for proposal has not been released to the contractors, as of March 15, 1992, the Air Force had obligated about \$183.3 million for fiscal year 1992 missiles. These funds were being used to buy missile components necessary to maintain the ACM production schedule. Additionally, the Air Force has obligated about \$16.5 million in fiscal year 1992 advance buy funds to begin the purchase of long-lead items for fiscal year 1993 missiles.

On February 26, 1992, the Air Force Program Executive Officer directed the ACM program office to stop work on all procurement activities past

520 missiles. He stated on February 27, 1992, that the contractors and their vendors were to retain their work force until they received restart or termination instructions within the next 90 days. On February 27, 1992, the Air Force issued stop work orders for the long-lead efforts on the fiscal year 1992 ACMs. The Air Force told the contractors that it will have enough ACMs after the fiscal year 1991 missile buy.

The Need for More ACMs Is Uncertain

The significant changes occurring in the former Soviet Union have resulted in unprecedented reductions in deployed nuclear weapons and an uncertainty in the United States as to how many and what types of nuclear weapons are still needed. ACMs are being produced to overcome specific weaknesses that were projected for ALCMs as the Soviet's deployed advanced systems. The Air Force was concerned that the Soviet defense systems projected for the 1990s would be able to destroy the ALCMs and the B-52G and B-52H bombers carrying them. With the dissolution of the Soviet Union, however, some of the projected threats are not being deployed. Other Soviet systems, although now deployed, do not work as well as projected.

For several years, the Air Force has been assessing the bomber force structure as well as the number and types of weapons needed to support them. In 1989, the Air Force decided to stop integration work that would be needed to carry cruise missiles on B-1B bombers and to retire B-52G cruise missile carriers in the early 1990s. These decisions leave only B-52H bombers to carry cruise missiles. About 1,900 cruise missiles would fully load all B-52H bombers and provide additional missiles for spares and testing. Currently, bomber force studies place an emphasis on the conventional (nonnuclear) role of bombers. As a result, it is uncertain whether all B-52H aircraft will be dedicated to carrying cruise missiles, assume conventional responsibilities, or have dual roles. In any event, with about 1,600 ALCMs available and the 520 ACMs on contract, the Air Force will have about 200 more cruise missiles than are required to equip all B-52H bombers.

Action to Resolve Prior Year Shortfalls Raises Concerns

In June 1991, the ACM program office identified a funding shortfall of \$94 million for fiscal year 1987 and 1988 ACM production contracts with General Dynamics. By March 1992, the estimated shortfall had increased to \$121 million for fiscal years 1986, 1987, and 1988. The contract ceiling prices and the Air Force's estimate of its share of the cost overrun as of March 31, 1992, are shown in table 1.

The contracts are fixed-price incentive fee type contracts where the government and the contractor share the difference between the target price and ceiling price, in accordance with a predetermined formula. The government is not responsible for costs in excess of the ceiling prices.

Table 1: ACM Contract Status at General Dynamics

Dollars in millions		
Fiscal year	Ceiling price	Air Force share of overrun
1986	\$518.8	\$9.0
1987	628.3	81.5
1988	274.3	30.7
Total	\$1,421.4	\$121.2

The overruns are primarily due to (1) costs being incurred to investigate, redesign, and replace missile components failing to meet specifications or quality standards and (2) suspension of deliveries from General Dynamics from November 1989 to June 1990 and from April to October 1991, while design and quality problems were resolved.

In February 1992, the Program Executive Officer, with concurrence from the Office of the Secretary of Defense, Comptroller directed the ACM program office to finance these overruns with fiscal year 1992 procurement funds.¹ On March 31, 1992, however, the Office of the Secretary of Defense, Comptroller advised the Air Force that it was not appropriate to use fiscal year 1992 ACM program funds to pay for additional costs of contracts originating in prior years. As a result of this decision, and since no other funds were available, in early April 1992, the Air Force partially terminated the contract for fiscal year 1987 and 1988 missiles. At the same time, it directed the contractor to transfer all the work not yet completed to a fiscal year 1992 letter contract to continue the work. The Air force is funding the letter contract using fiscal year 1992 funds. Funds from other programs were used to pay for the fiscal year 1986 contract overrun.

It appears to us that additional costs are likely to be incurred as a result of partially terminating the contract and completing production under a new

¹In a draft of this report provided to DOD for comment, we stated that, according to the program office, if fiscal year 1992 funds are used to cover prior year contract overruns and other program costs, the remaining funds could buy about 50 missiles rather than the 120 the Congress expected to buy in fiscal year 1992.

contract. We are concerned about such costs, as well as legal and programmatic implications of these actions. Therefore, we will continue to review these matters.

Delivery Delays and Quality Problems Not Fully Resolved

As of March 1992, ACM contractors had not demonstrated the ability to consistently deliver quality missiles on schedule. The ACM baseline delivery schedule dated May 1984 shows all missiles were to be delivered to the Air Force by the end of fiscal year 1990. However, numerous development, testing, production, and quality problems, as well as associated retrofit actions delayed missile deliveries for years.

In July 1991, the Defense Acquisition Board conditionally approved full production of ACM, provided that the Air Force demonstrate sustained deliveries of newly built missiles. The new schedule required General Dynamics to deliver 53 missiles and McDonnell Douglas to deliver 15 missiles by March 31, 1992. This schedule was changed in October 1991, requiring 29 missiles from General Dynamics and 19 from McDonnell Douglas. As of March 31, 1992, General Dynamics had delivered 40 ACMs, but McDonnell Douglas had not delivered any.

General Dynamics has made significant progress in reducing defects and improving the quality of its missiles. According to the Air Force, the maintenance time required to make a missile fully capable of performing its mission averaged 36 hours prior to the April 1991 delivery suspension, while missiles received since October 1991 required an average of only 2.5 hours. The Strategic Air Command, however, continues to identify manufacturing defects in missiles during receipt inspections. Of the 40 missiles General Dynamics delivered to the Air Force between November 1991 and March 1992, the Strategic Air Command had completed inspections on 26 and found 16 with defects. While some of these defects were minor, three missiles had a critical subsystem that did not work during the acceptance tests. The principal factors preventing delivery of McDonnell Douglas missiles is their inability to pass the radar cross-section tests and the problem of reaching an agreement with the Air Force on the warranty and prices for five engineering change proposals. The Air Force expects to resolve these issues and to begin accepting missiles from McDonnell Douglas in May 1992.

Recommendation

We recommend that the Secretary of Defense direct the Secretary of the Air Force to take no further action to procure fiscal year 1992 ACMS until the need for additional missiles is validated. The validation should consider the reduced Soviet threat, the associated realignment of U.S. strategic forces, the utility of ALCMs, and the availability of funds appropriated for additional ACMS.

Agency Comments

DOD advised us on April 7, 1992, that it generally concurs with this report and that, as part of an ongoing review and in consonance with our recommendation, it is reviewing cruise missile inventory requirements. The review is expected to be completed shortly. A copy of DOD's comments is in appendix I.

Scope and Methodology

We began work on this assignment in August 1991 with a broad objective to examine ACM acquisition strategy, quality, contracts, and other issues as a follow-on to our November 1990 report.² The President's January decision to stop production caused us to focus on the number of ACMS to be acquired and circumstances that could result in further savings.

To obtain information on the program, we reviewed documents and interviewed officials at the ACM System Program Office, Wright-Patterson Air Force Base, Ohio; the Departments of Defense and the Air Force, Washington, D.C.; the Strategic Air Command, Offutt Air Force Base, Nebraska; K.I. Sawyer Air Force Base, Michigan; General Dynamics, Convair Division, San Diego, California; and McDonnell Douglas Missile Systems Company, St. Louis, Missouri, and Titusville, Florida. We performed our review from August 1991 through February 1992 in accordance with generally accepted government auditing standards.

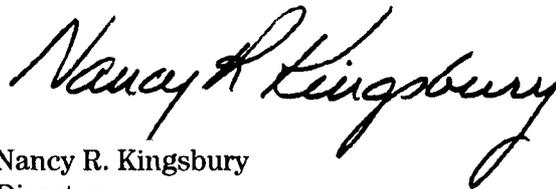
As you know, 31 U.S.C. 720 requires the head of a federal agency to submit a written statement on actions taken on our recommendation to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of this report. A written statement must also be submitted to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

²Strategic Missiles: Uncertainties Persist in the Advanced Cruise Missile Program, (GAO/NSIAD-91-35, Nov. 16, 1990).

We are sending copies of this report to the Chairmen, House and Senate Committees on Armed Services; the Chairmen, Subcommittees on Defense, House and Senate Committees on Appropriations; the Secretary of the Air Force; the Director, Office of Management and Budget; and other interested parties. We will make copies available to others upon request.

Please contact me at (202) 275-4268 if you or your staff have any questions concerning this report. Major contributors to this report are listed in appendix II.

Sincerely yours,

A handwritten signature in black ink that reads "Nancy R. Kingsbury". The signature is written in a cursive style with a large, prominent "N" and "K".

Nancy R. Kingsbury
Director
Air Force Issue

Comments From the Department of Defense



ACQUISITION

OFFICE OF THE UNDER SECRETARY OF DEFENSE

WASHINGTON, DC 20301-3000

April 7, 1992

Mr. Frank C. Conahan
Assistant Comptroller General
National Security and
International Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Conahan:

This is the Department of Defense (DoD) response to the General Accounting Office (GAO) draft report entitled--"STRATEGIC MISSILES: ACM Program Opportunities for Additional Savings," dated March 11, 1992 (GAO Code 392657/OSD Case 8993). The Department generally concurs with the report.

The Department initiated a substantial restructuring of its strategic forces last year, and with the President's State of the Union address, has already cut back on its modernization program. The Department has reduced procurement of some existing systems and has terminated other programs.

In the case of the Advanced Cruise Missile, fiscal year 1992 production work has been curtailed with an Air Force "stop work order" issued to the contractors on February 27, 1992, pending a Secretary of the Air Force decision on termination. On March 6, 1992, the Air Force delivered its proposed implementation plan for Department review. As part of that on-going review, and in consonance with the GAO recommendation, the Department is reviewing the Advanced Cruise Missile and Air-Launched Cruise Missile inventory requirements, taking into account threat and force structure changes, as well as funding availability. The DoD decision on any further procurement of Advanced Cruise Missiles is expected shortly.

The Department appreciates the opportunity to comment on the draft report. Additional technical comments on the draft were separately provided.

Sincerely,

A handwritten signature in cursive script that reads "George R. Schneiter".

George R. Schneiter
Director
Strategic & Theater Nuclear Forces

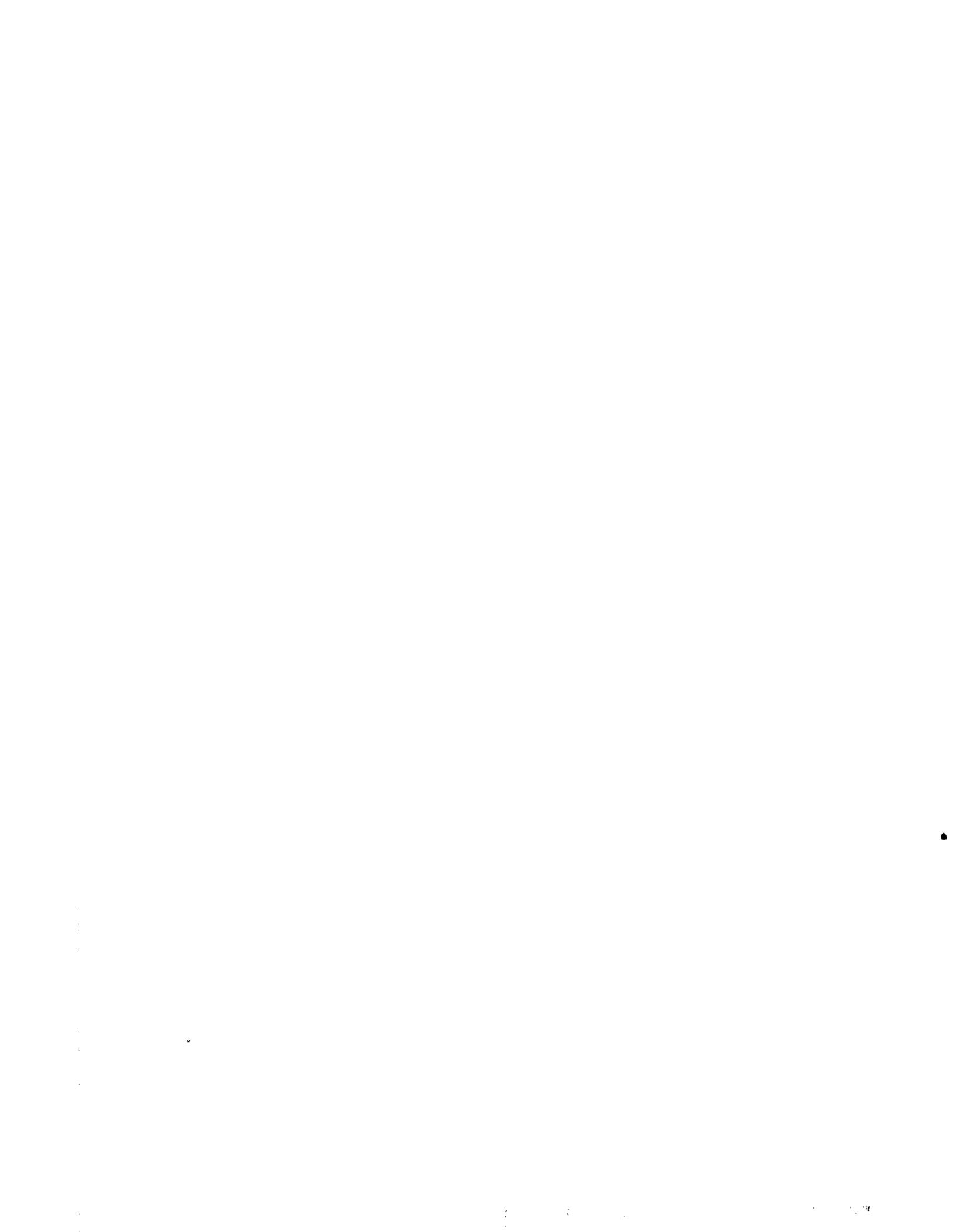
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