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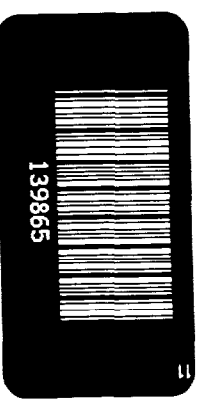
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Report to the Chairman, Subcommittee
on Defense, Committee on
Appropriations, House of
Representatives

October 1989

**MUNITIONS
DEVELOPMENT**

Status of the Direct
Airfield Attack
Combined Munitions



National Security and
International Affairs Division

B-236902

October 27, 1989

The Honorable John P. Murtha
Chairman, Subcommittee on Defense
Committee on Appropriations
House of Representatives

Dear Mr. Chairman:

This report, prepared at your request, addresses (1) the status of the Air Force's Direct Airfield Attack Combined Munitions (DAACM), which is currently under development as a runway cratering weapon, (2) the Air Force's requirement for DAACM, (3) the Air Force's plans for completing DAACM development, and (4) actual and projected costs of the DAACM program. On August 24, 1989, we briefed one of your representatives on the results of our work. This report summarizes the information we presented.

Results in Brief

On June 16, 1989, the Air Force decided not to begin DAACM full-scale development because of its concerns about the munitions' effectiveness. According to the Air Force, recent intelligence information indicates that runways at Warsaw Pact main operating bases will be more difficult to penetrate and crater than the Air Force expected when it planned DAACM development. The Air Force plans to conduct additional tests of DAACM's cratering submunition and other airfield attack munitions against runways built to current intelligence estimates. The Air Force's decision on whether to proceed with DAACM development or pursue other munitions options is expected in April 1990.

The Air Force received \$13.8 million of research, development, test, and evaluation funds¹ for fiscal year 1989. After its decision not to begin full-scale development, the Air Force internally reprogrammed \$8.1 million of the funds to two other programs: \$3.99 million to AGM-130 munitions development and \$4.14 million to B-1B electronic countermeasures. The fiscal year 1989 Defense Appropriations Conference Report requires prior congressional notice of changes to research and development appropriations that reduce an existing program element by \$4 million or more, or 20 percent of the appropriated level of the program element, whichever is greater. We informed the Air Force of this matter. According to an Air Force official, the Air Force plans to reinstate the

¹These are 2-year funds that can be obligated in the appropriation year or the subsequent year.

\$4.14 million to the DAACM program and use the funds for munitions testing. According to the same official, the funds transferred to the AGM-130 program will remain in that program.

The Air Force requested \$17 million of research, development, test, and evaluation funds for fiscal year 1990. According to an Air Force official, after decisions not to begin full-scale development and to reinstate the \$4.14 million, the Air Force estimates that only \$1.1 million requested for fiscal year 1990 will be needed for munitions testing. Therefore, the Congress may want to reduce the Air Force's request for fiscal year 1990 funds for DAACM by \$15.9 million.

Background

According to the Air Force, DAACM's primary purpose is to reduce the enemy's ability to effectively use its fighter aircraft by closing down airfields through damage to the airfield operating surfaces, primarily runways. DAACM is designed to crater runways and taxiways and delay and disrupt repair efforts.

DAACM is to be a 1,000-pound dispenser weapon that contains 8 cratering submunitions and 24 area denial mines. The submunitions are to penetrate and explode beneath runways and taxiways to raise and crater the concrete. The mines are to disperse around the craters to disrupt and delay enemy runway repair operations by detonating after a randomly set time or when physically disturbed.

The objective of the DAACM program is to integrate the 8 cratering submunitions with the 24 area denial mines in a tactical munitions dispenser so that they properly eject from the dispenser and disperse over the target. The cratering submunitions, Bomb Kinetic Energy Penetrators, were developed under a separate submunitions program. The mines, variants of British area denial mines, are in production.

Aircraft are to fly directly over the targets to release DAACM. Several U.S. Air Force aircraft, including the F-111, F-15, and F-16, and various North Atlantic Treaty Organization aircraft are to be capable of delivering the munitions.

Program Cost and Schedule

The Air Force estimates that the DAACM program will cost approximately \$1.8 billion in escalated dollars: \$110 million for research and development and \$1.7 billion for production of 12,000 units.

DAACM full-scale development was scheduled to begin in fiscal year 1986, but technical problems in the cratering submunitions' development delayed the start. According to Air Force officials, full-scale development was to start only after the submunitions successfully completed development and testing.

The Air Force Systems Command issued a request for proposals for full-scale development contracts in June 1987 with a target award date of December 1987. However, that award date was not met because testing of the cratering submunitions was not completed until May 1988. In June 1989 the Air Force decided not to award the contracts for full-scale development and cancelled the request for proposals because of revised intelligence estimates on the thickness of runways at Warsaw Pact main operating bases.

The Air Force plans to conduct additional tests of DAACM's cratering submunitions against runways built to current intelligence estimates. It plans to use the test results to decide in April 1990 whether to proceed with DAACM development. According to the Air Force, the start of full-scale development will slip 2 years if the decision is to proceed with DAACM development.

Improved Warsaw Pact Runways Have Impacted the DAACM Program

Intelligence information has revealed that the Warsaw Pact plans to improve many of the runways at its main operating bases. Some existing runways are being overlaid with additional concrete to more than double their thickness.

The cratering submunitions were designed to be effective against the original runway thickness. Thus, the Air Force is concerned that the submunitions may not penetrate the improved runways to produce the desired damage. As a result, it decided not to begin DAACM full-scale development and directed that the submunitions be tested against an improved runway. It also directed that other potential airfield attack munitions be tested against the improved runway. Most of the tests will be conducted at the Munitions Systems Division, Eglin Air Force Base, Florida, where an improved runway will be constructed by overlaying an existing test runway with concrete.

The Air Force plans to use the test results to decide in April 1990 whether to proceed with DAACM development using the submunitions as they are currently configured, proceed with DAACM using modified submunitions, or pursue other potential airfield attack munitions.

The Munitions Systems Division plans to use DAACM funds to test other airfield attack munitions, including the Durandal (the Air Force's current runway cratering munition), developed in France, and the improved 2,000-pound bomb. The Air Force plans to complete these tests and analyze their results by June 1990.

The Air Force also plans to test another potential airfield attack munition, the SAMANTA, under a foreign weapons evaluation program. France is developing the SAMANTA as a possible replacement for the Durandal. According to Air Force officials, the SAMANTA is currently in the French equivalent of full-scale development. The Air Force also plans to have these test results available in June 1990.

Air Force's Financial Plan for DAACM

As of June 15, 1989, a total of \$95.6 million had been expended or budgeted for DAACM research and development through fiscal year 1994: \$12.4 million was expended through fiscal year 1988; \$13.8 million was appropriated for research, development, test, and evaluation for fiscal year 1989; \$17 million was requested for fiscal year 1990; and \$52.4 million was planned for fiscal years 1991 through 1994.

According to an Air Force official, as of September 21, 1989, the status of the fiscal year 1989 funds was as follows: \$5.1 million obligated, \$8.1 million reprogrammed and unobligated, and \$600,000 planned for test hardware. According to the official, as of September 29, 1989, the Air Force planned to reinstate \$4.14 million of the reprogrammed fiscal year 1989 funds and estimated that it needed only \$1.1 million of fiscal year 1990 funds for DAACM testing and related efforts. The Air Force had planned to use \$12.3 of the \$17 million requested for fiscal year 1990 for the full-scale development contracts.

Conclusions

The Air Force decided not to begin full-scale development of DAACM because the cratering submunitions' effectiveness had not been demonstrated against targets that are representative of Warsaw Pact improved runways, DAACM's primary target. Additional tests of the submunitions, if properly structured, should assist the Air Force in deciding whether to proceed with DAACM development.

The Air Force determined that it needs only \$1.1 million of the \$17 million requested for fiscal year 1990 since it decided to (1) postpone full-scale development, (2) reinstate \$4.14 million of the \$8.1 million reprogrammed fiscal year 1989 funds, and (3) retain in the AGM-130

program the remaining \$3.99 million of fiscal year 1989 funds that were reprogrammed. Therefore, the Air Force's request for fiscal year 1990 funds is overstated by \$15.9 million.

Matter for Congressional Consideration

The Congress may want to reduce the Air Force's request for fiscal year 1990 funds by \$15.9 million.

Objectives, Scope, and Methodology

Our objectives were to address (1) the status of DAACM development, (2) the Air Force's requirements for DAACM, (3) the Air Force's plans for completing DAACM development, and (4) actual and projected costs of the DAACM program. To accomplish these objectives, we interviewed Air Force officials and reviewed correspondence, technical reports, and program management and financial planning documents at Headquarters, Air Force, Washington, D.C.; Headquarters, Air Force Systems Command, Andrews Air Force Base, Maryland; Air Force Systems Command's Munitions Systems Division, Eglin Air Force Base, Florida; and Headquarters, Tactical Air Command, Langley Air Force Base, Virginia.

We conducted our review from April through September 1989 in accordance with generally accepted government auditing standards. As requested, we did not obtain official agency comments on this report. However, we discussed the information in this report with Department of Defense and Air Force officials and included their comments where appropriate.

This report was prepared under the direction of Mr. Harry R. Finley, Director, Air Force Issues, who may be reached on (202) 275-4268 if you or your staff have any questions concerning the report. Other major contributors are Paul L. Jones, Associate Director, and Robert L. Pelletier, Assistant Director, National Security and International Affairs Division, Washington, D.C.; and Richard G. Payne, Regional Management Representative, Gaines R. Hensley, Evaluator-in-Charge, Robert L. Self, Site Senior, and Kellie O. Schachle, Evaluator, Norfolk Regional Office.

We are sending copies of this report to the Secretaries of Defense and the Air Force; the Director, Office of Management and Budget; and interested congressional committees.

Sincerely yours,



Frank C. Conahan
Assistant Comptroller General

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