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Report to the Chairmen, Subcommittees on Defense, Senate and House Committees on Appropriations

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DEFENSE BUDGET

Potential Reductions to the Army and the Navy Missile Budgets

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International Affairs Division

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The Honorable Daniel K. Inouye
Chairman, Subcommittee on Defense
Committee on Appropriations
United States Senate

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

As requested, we reviewed the merits of the Army's justification for its fiscal year 1990 appropriation request of $2.5 billion for the following 13 missile systems:

- the Advanced Antitank Weapon System-Medium,
- the Patriot,
- the Multiple Launch Rocket System,
- the Stinger,
- the Pedestal Mounted Stinger,
- the Non-Line-of-Sight missile,
- the Hellfire,
- the Chaparral,
- the Line-of-Sight-Forward-Heavy weapon system,
- the Tube-launched, Optically-tracked, Wire-guided (TOW-2) Missile,
- the Army Tactical Missile,
- the Multiple Launch Rocket System-Terminal Guidance Warhead, and
- the Hawk.

We also reviewed (1) the Army's $247.5 million request to procure missile spares and repair parts and (2) the Navy's $50.4 million request to procure the Hellfire missile system. In addition, we examined selected segments of prior-year missile budgets. We identified $517 million in potential reductions to the fiscal year 1990 requests for 7 of the 13 missile systems and for missile spares and repair parts. We also identified $29.5 million in potential reductions to the fiscal year 1989 budget for one missile system and for missile spares and repair parts. These reductions primarily resulted from (1) requests for fiscal year 1990 procurement funds that could be deferred to future years, (2) questionable requirements, (3) reduced requirements, (4) less than anticipated costs, and (5) recalculated amounts using more current information. Details regarding these potential reductions are provided in appendix I.

As you requested, we did not obtain agency comments on this report. However, we discussed its contents with officials from the Office of the Secretary of Defense, the Department of the Army, the U.S. Army Missile Command, and the Naval Air Systems Command, and we have incorporated their comments where appropriate. Department of Defense, Army and Navy officials generally agreed with the factual material presented in this report, but they generally disagreed with the funding reduction. In some instances, they believed that the funds could be used for other requirements; in other instances, they believed that the funding requested would contribute to more efficient acquisition, lower unit costs, or earlier system fielding; and, in one instance, they believed that the funding would benefit operational survivability. The objectives, scope, and methodology of our work are described in appendix II.

We are sending copies of the report to various congressional committees; the Secretaries of Defense, the Army, and the Navy; the Director, Office of Management and Budget; and other interested parties.

This report was prepared under the direction of Richard Davis, Director, Army Issues, who may be reached on (202) 275-4141 if you or your staff have any questions. Other GAO staff members who made major contributions to this report are listed in appendix III.

Frank C. Conahan
Assistant Comptroller General

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Abbreviations

AAWS-M	Advanced Antitank Weapon System-Medium
DOD	Department of Defense
GAO	General Accounting Office
MLRS	Multiple Launch Rocket System
MOU	Memorandum of Understanding
NATO	North Atlantic Treaty Organization
NLOS	Non-Line-of-Sight
OSD	Office of the Secretary of Defense
TOW-2	Tube-launched, Optically-tracked, Wire-guided

Potential Reductions to Missile Programs

We reviewed the Army's and the Navy's budgets for selected missile systems and the Army's budget for spares and repair parts. We identified potential budget reductions of $546.5 million—$517 million from the fiscal year 1990 budget request and $29.5 million from the fiscal year 1989 budget. Table I.1 shows the potential reductions for each missile system and for spares. The identified reductions are in Army procurement funds unless otherwise noted.

Table I.1: Summary of Potential Reductions to Missile Budgets

Dollars in millions

	Fiscal Year		
Item	**1990**	**1989**	**Total**
Advanced Antitank Weapon System-Medium	$21.1[a]	0	$21.1[a]
Patriot	248.3	0	248.3
Multiple Launch Rocket System	88.4	$26.4	114.8
Stinger	12.9	0	12.9
Pedestal Mounted Stinger	36.9	0	36.9
Non-Line-of-Sight missile	32.5	0	32.5
Hellfire	1.6[b]	0	1.6[b]
Spares and repair parts	75.3	3.1	78.4
Total	**$517.0**	**$29.5**	**$546.5**

[a]Research, development, test, and evaluation funds.

[b]Navy funds.

In addition, we obtained information on the Hawk missile system budget request that could be useful to the Committees on Appropriations as they consider the Army's missile budget.

Advanced Antitank Weapon System-Medium

The Advanced Antitank Weapon System-Medium (AAWS-M) is designed to be a medium range, one-man-portable anti-armor system for use in rapid deployment operations, rough terrain, and air assault operations. It is intended to defeat tanks and other targets expected on the battlefield of the 1990s, and it will replace the Dragon weapon system in the Army and Marine Corps inventories. The system will consist of a missile; an expendable container/launch tube, which houses the missile; and a reusable command and launch unit for target acquisition and surveillance.

The Army requested $158.7 million in research, development, test, and evaluation funding for fiscal year 1990 to continue full-scale development of the AAWS-M. We believe that the request could be reduced by $21.1 million—$10.3 million that is not required until fiscal year 1991

and an additional $10.8 million that is intended to fund a risk-reduction program that could be funded from an amount requested to cover developmental risk.

The Army could defer $10.3 million of its request until fiscal year 1991, when it plans to obligate the funds. According to the AAWS-M program obligation plan for fiscal year 1990, the fiscal year 1990 program includes $105.2 million for contractual effort. The plan also shows that only $94.9 million will be obligated during fiscal year 1990 and that the remaining $10.3 million—designated for a 13th month of contractual effort—is not scheduled for obligation until fiscal year 1991. However, Army Regulation 70-6 requires that the funding of any research and development project be limited to the obligational authority necessary to cover costs expected to be incurred during the fiscal year, and it specifically states that funding for contractual efforts should be programmed on a fiscal year basis.

In addition, the request could be further reduced by $10.8 million currently identified for a risk-reduction program in the fiscal year 1990 obligation plan. A significant amount of contingency funds is included elsewhere in the request to cover developmental risk; therefore, we believe that the risk-reduction program could be funded from that amount.[1] In the event that the Committees wish to separately fund the risk-reduction effort, the budget request could be reduced by $5.8 million because the Army currently estimates the program to cost $5 million rather than the $10.8 million it estimated earlier.

The AAWS-M project manager stated that the facts, as we have presented them, are accurate. He agreed that $10.3 million would not be obligated until fiscal year 1991. He believed that the $5 million risk-reduction program should be separately funded to prevent a possible risk funding shortfall later in the fiscal year 1990 program. However, our analysis did not identify specific risk funding requirements that will exceed the remaining risk funds.

Patriot

The Patriot is a surface-to-air missile capable of engaging multiple high-performance aircraft. The system consists of a radar, ground support equipment, missile launchers, and missiles. It is intended for use primarily against enemy aircraft flying at high to medium altitudes, and it is

[1]The specific amount is not provided because the Army considers it procurement-sensitive.

designed to protect ground forces and other high-value targets such as air bases in the rear combat zone.

The Army requested $924.5 million for fiscal year 1990 to buy 815 missiles and related ground support equipment. The request includes $248.3 million to fund the first increment of a potential weapons agreement to implement a Memorandum of Understanding (MOU) with Italy. The Committees on Appropriations may wish to deny the $248.3 million request based on classified information previously reported to the Congress. If this funding is not deleted, we believe that fiscal year 1990 obligational authority could be deferred until (1) the agreement is equitably defined, (2) the United States is assured of Italian funding, and (3) the agreement's impact on the U.S. industrial base is evaluated.

In the mid-1980s, the United States and Italy created a study team to assess their joint and individual air defense needs. The resulting study outlined air defense requirements for both countries, and on the basis of the study, the U.S. Secretary of Defense and the Italian Minister of Defense signed a joint air defense MOU in March 1988. That MOU established a broad framework for negotiating an agreement which, if implemented, is expected to cost the U.S. government $496.5 million over a 2-year period ($248.3 million for fiscal year 1990). The MOU involves exchanging Patriot ground support equipment for Italian-procured and operated air defense systems for four U.S. bases in Italy. The defense would include Italian-made Spada missiles and a short-range air defense complement equivalent to the U.S.-made Pedestal Mounted Stinger system. In addition, the United States would license Italy to produce up to 160 Patriot launchers and 1,280 Patriot missiles.

Agreement Not Defined

At the time of our review, the MOU had been signed, but the negotiators had not agreed on the implementation terms. Although positions could change during further negotiations, several Italian positions, if implemented, could change the terms of the original agreement. These positions include the following:

1. Italian negotiators have proposed that Italy should provide only 12 of the 16 Spada fire sections originally stipulated. U.S. negotiators are evaluating this position.

2. Italian negotiators also have proposed that the Italian-made Breda machine gun be used to satisfy the provision for the short range air defense complement. However, U.S. negotiators have not yet accepted

that position, and the Department of Defense (DOD) has initiated a study to compare the Breda machine gun with the Pedestal Mounted Stinger. Negotiation officials believed that the study would be completed in September 1989.

3. The Italian negotiators stated that the legislative authority to transfer the title of Italian-procured air defense systems to the United States cannot be obtained before the implementing agreement is signed. As an alternative, they proposed transferring the title to the United States through a North Atlantic Treaty Organization (NATO) entity. However, U.S. negotiators oppose this proposal because it (1) differs from the original agreement, (2) involves additional administrative expense, and (3) requires additional time.

United States Not Assured of Italian Funding

If the Congress grants unrestricted obligational authority, DOD would be authorized to sign the implementing agreement and contract for the Patriot ground support equipment before Italy commits funding to cover its part of the agreement. DOD expects the implementing agreement to be signed in October or November 1989—up to 2 months after the requested fiscal year 1990 funds could become available—but Italian funding may not be ensured at that time. The chief U.S. negotiator expects congressional approval of the appropriation request to authorize the implementing agreement, but he said that the Italian government will have to pass a special law—outside its normal budgetary process—to fund its part of the MOU. Although funding for the MOU is not ensured, the U.S. negotiator believed that the Italian government recognizes the importance of the legislation and is prepared to enact it once the implementing agreement is signed.

Impact on Industrial Base Not Evaluated

The MOU's impact on the U.S. industrial base had not been evaluated. However, the fiscal year 1989 National Defense Authorization Act requires DOD to obtain the Secretary of Commerce's views on the impact of international defense equipment MOUs on the U.S. industrial base. According to the chief U.S. negotiator, DOD had not contacted the Commerce Department concerning this MOU as of August 16, 1989, but it planned to do so in the near future.

This MOU could affect the U.S. industrial base. For example, under the MOU, the United States could provide Italy with the necessary technology to produce Patriot missiles and launchers and permit it to compete for NATO maintenance requirements. Therefore, the Committees could

withhold obligational authority until the impact on the industrial base is assessed.

Agency Views

Patriot project office and negotiation team officials expressed general agreement with the facts as we have presented them. However, they believe that awarding a contract for Patriot equipment in fiscal year 1990 is critical because Patriot ground support equipment production may end in February or March 1990, and reestablishing the production line would be prohibitively expensive. In addition, they noted that an option to the existing multiyear contract expires in November 1989 and that it is unlikely the contractor will extend the contracted price beyond February or March 1990. However, we believe that resolving the issues would not necessarily preclude contracting for the equipment by March 1990. If these issues are not resolved at that time, we believe that they have sufficient merit to warrant deferring obligational authority until they are resolved.

Multiple Launch Rocket System

The Multiple Launch Rocket System (MLRS) is a self-propelled rocket launcher designed to provide a high volume of fire in a short period of time. It is mounted on a derivative of the Bradley Fighting Vehicle, and it requires three crew members. The system is used in counterfire, air defense suppression, and armor-defeating roles.

The Army requested $403.2 million in funding for the MLRS—$311.4 million to procure 67 launchers, 24,000 rockets, and ground support equipment; $63.4 million to provide advanced materials for later procurements under the multiyear contract; and $28.4 million for a launcher modification program to make older launchers capable of firing deep-attack munitions. We believe that consideration should be given to reducing the fiscal year 1990 requests by $88.4 million and the fiscal year 1989 budget by $26.4 million.

Fiscal Year 1990 Budget Request

The potential reduction of $88.4 million for fiscal year 1990 includes deferring (1) $60 million for 29 launchers added to the request after the Army's initial submission to the Congress and (2) $28.4 million for launcher modifications. Additional details regarding these reductions are provided below.

Launcher Deferral

The Army's request includes 29 launchers added after its initial submission to the Congress. This addition was based on a November 1988

Defense Science Board Study that recommended improving fire support capability by increasing scheduled procurements of MLRS launchers. However, the Army does not have an approved plan for making these 29 launchers operational. Therefore, the Committees could either (1) deny the funding request and direct the Army to request these funds for fiscal year 1991 or (2) grant the request but restrict the Army's authority to obligate the funds until plans are approved for making the launchers operational.

According to the Army representative for MLRS integration, the plan for obtaining personnel to operate and maintain the additional launchers has been prepared and proposed to the Army Chief of Staff, but a decision is not expected before February 1990. In addition, according to the Chief of MLRS Program Management, the Army has not determined the availability of field equipment needed to operate and maintain the additional 29 launchers. This official expects this information in December 1989.

The project manager said that the Army is working toward resolving the uncertainties about support equipment and personnel, but the effort is not complete at this time. He also stated that the additional 29 launchers would enhance the deep-attack launcher survivability by increasing the number of launchers that the enemy must counter to prevent deep attack. But the launchers cannot become operational if personnel and support equipment are not available.

Modification Deferral

In addition, the request includes $28.4 million to implement the second year of a modification program to make earlier launchers capable of firing deep-attack munitions. Earlier launchers can fire only MLRS rockets, but those bought beginning with the 1987 program have the capability to also launch deeper attack munitions, such as the Army Tactical Missile and the Sense and Destroy Armor Munition.

The Army could defer the $28.4 million it requested to modify already fielded launchers to make them capable of deep attack because the modified launchers will not be needed to meet the deep-attack requirements at the time of fielding. If the launcher modification program is deferred until fiscal year 1991 (October 1990), modified launchers could be available by August 1992, based on a 22-month lead time to acquire the modifications.

The modified launchers will not be needed before August 1992 because of the limited supply of deep-attack munitions available for use with the

launchers. Only 465 deep-attack munitions are scheduled for fielding by August 1992, and without the modification program, at least 136 launchers capable of deep attack are to be fielded at that time—an average of 3.4 missiles per launcher. However, the Army plans to acquire a substantially larger number of munitions for each launcher.

Fiscal Year 1989 Budget

We believe that the Army's fiscal year 1989 budget for the MLRS could be reduced by $26.4 million by deferring launcher modifications until they are needed. The Army could defer the fiscal year 1989 modification program for the same reasons that we believe the 1990 program could be deferred. The projected contract award date for the fiscal year 1989 program has already slipped until fiscal year 1990, but we believe that the award could be deferred until at least 1991.

Agency Views

The MLRS project manager agreed with us that the scheduled supply of deep-attack munitions does not solely justify the modification of launchers in 1989 and 1990, but he said that the modification program should proceed as scheduled because having more launchers of the deep-attack configuration would improve operational survivability in the event of hostilities. He said that the modification would also improve the launcher's reliability and operational efficiency, and having only one configuration would require less logistics support and training. However, the primary purpose of the modification is to provide additional launchers to fire deep-attack munitions.

Stinger

Stinger is a man-portable guided missile system used to defend against low-flying enemy airplanes and helicopters. It is stored in a disposable launch tube and launched by using a reusable gripstock. The current system includes a reprogrammable microprocessor to counter more advanced threats.

The Army requested $117.5 million for fiscal year 1990 to buy 2,375 missiles, 1,125 gripstocks, 131 tracking head trainers (training devices), and related support equipment. We believe that the Army could defer its entire request for gripstocks and training devices until they are needed, reducing the request by $12.9 million—$6.5 million for gripstocks and $6.4 million for training devices.

The Army is requesting funding for gripstocks and training devices that are not needed to meet fiscal year 1990 requirements. According to the

Chief of the System Support Branch, the gripstocks requested for fiscal year 1990 will not be needed until at least 1993. In addition, according to a project office analysis, the Army has already bought 384 training devices, but the same analysis shows that the Army requires only 257 through fiscal year 1990—that is, the Army has an oversupply of 127 without any additional purchases. Therefore, on the basis of project office assessments, we believe that the entire fiscal year 1990 request for gripstocks and training devices can be deferred without affecting readiness.

The project manager agreed that the Army's gripstock and training device procurements would exceed fiscal year 1990 requirements. He stated, however, that deferring the procurements could cause (1) unit prices to increase and (2) the contractor to close the gripstock production line. Even so, unit price increases are speculative until the Army obtains firm proposals. Also, the Army forecasts enough foreign military sales of gripstocks in the fiscal year 1990 program to keep the production line open. If these sales do not occur, the Army will need about $1.4 million if the Committees wish to maintain gripstock production at the minimum sustaining rate of about 20 gripstocks a month.

Pedestal Mounted Stinger

The Pedestal Mounted Stinger system is a transportable surface-to-air missile/gun weapon system mounted on the High-Mobility Multipurpose Wheeled Vehicle. The system consists of a fire unit and the standard vehicle-mounted launcher, and it fires all versions of the Stinger missile. It is operated by a two-man crew and is intended for use against low-altitude enemy aircraft.

The Army requested $115.8 million for fiscal year 1990 to buy 122 Pedestal Mounted Stinger fire units, launchers, and related equipment. We believe that $36.9 million of the request—$27.8 million for 50 fire units and $9.1 million for 50 launchers—could be deferred until fiscal year 1991.

Regarding the deferral of funding for fire units, the Army originally planned to buy 72 fire units under an option to the existing contract and to obtain the remaining 50 fire units competitively. However, the Army no longer plans fire unit competition, having chosen instead to procure the 72 units under the existing contract option and negotiate with the same contractor for the remaining 50 units. But, since the Army plans a multiyear contract for fire units in fiscal year 1991, we believe that the 50 additional fire units could be delayed until then and purchased under

the multiyear contract. The Army estimates that the additional fire units will cost about $2.6 million less if bought under the multiyear contract.

Regarding the deferral of funding for launchers, fire units and launchers are deployed on a one-for-one basis; therefore, deferring 50 fire units should make the purchase of 50 launchers unnecessary.

The product manager for the Pedestal Mounted Stinger agreed that savings from deferring the funding for fire units are likely. He emphasized, however, that the savings are contingent upon the Army's receiving fiscal year 1991 multiyear contracting authority and reinstating the deferred quantities in fiscal year 1991. He added that the deferrals (1) would delay deployments by 1 to 3 months, (2) could possibly result in higher unit costs for launchers for fiscal year 1990, and (3) could jeopardize the Army's plans for competing the launcher if quantities are not sufficient to maintain dual sources. While deferring the launchers until 1991 will delay deployments by 1 to 3 months, the Army did not identify any military urgency that justifies spending over $9 million in 1990 and losing the opportunity to save about $2.6 million. In addition, the launcher delay would result in the Army's buying more launchers in fiscal year 1991, which could (1) result in a lower unit price than anticipated and (2) provide an incentive for dual-source participation in anticipation of the larger fiscal year 1991 quantity.

Non-Line-of-Sight Missile

The Non-Line-of-Sight (NLOS) missile is a component of the Forward Area Air Defense System. It is intended to protect ground troops and vehicles against enemy helicopters in the forward area of the battlefield, but it will operate from concealed positions, out of direct enemy view. The system consists of the missile and launcher/gunner station. Upon launch, the gunner locates targets through a video display, which portrays the missile seeker's view as the missile cruises at low altitudes. These images pass through a fiber optic link to the gunner's console. The system will be deployed on a derivative of the Multiple Launch Rocket System vehicle or on the High Mobility Multipurpose Wheeled Vehicle.

The Army requested $32.5 million in fiscal year 1990 advanced procurement funding for long-lead items to support fiscal year 1991 initial production. According to the budget justification documents, the advanced procurement funds will accelerate initial fielding by 1 year. However, the justification document is in error because the advanced procurement

funds would accelerate fielding by only about 5 months. Therefore, the Committees may wish to defer the advanced procurement request.

Delivery may not be accelerated more than 5 months because the Army cannot award the advanced procurement contract until May 1990—about 5 months before fiscal year 1991 funds could be made available for the initial production program. In its approval of full-scale development of the NLOS, OSD required a second review of NLOS program accomplishments before permitting the award of the fiscal year 1990 advanced procurement contract. Since that review is scheduled to be completed in April 1990, the NLOS project manager said that the advanced procurement contract cannot be awarded before May 1990 and that a later award is possible.

The project manager agrees that the funding requested for fiscal year 1990 would accelerate delivery by only about 5 months. However, he stated that any delays in fiscal year 1991 funds would further delay the contract award and the fielding of the system. But Army procurement planning guidance states that, for procurement planning purposes, it should be assumed that funds will be available on October 1 at the beginning of each fiscal year.

Hellfire

Hellfire is a laser-guided, air-to-ground anti-armor weapon system deployed from the Army AH-64 Apache helicopter and the Marine Corps Cobra helicopter. The missile homes in on laser energy reflected from a target that has been illuminated by a laser designator.

The Army and the Navy requested $188.7 million for fiscal year 1990 to procure 4,200 improved Hellfire missiles and associated equipment—$138.3 million for 3,102 Army missiles and $50.4 million for 1,098 Navy missiles. We did not identify any potential reductions to the Army's request, but we believe that the Navy's request could be reduced by $1.6 million because the Navy now plans to buy the less costly, unimproved version of the missile.

The Navy's request contains $7.4 million uniquely related to the improved missile—$6.5 million for hardware and $0.9 million for testing. These funds will not be required for the purpose for which they were requested. However, according to a Naval Air Systems Command representative responsible for the Hellfire budget, some of the $7.4 million will be needed to fund increased costs related to the unimproved missile. These costs include (1) $0.2 million related to the increased unit

cost of the missile container because of a reduced production quantity and (2) $1.4 million to fund separate Navy warhead tests. In addition, the Navy representative stated that the Navy's request is short of covering its fair share of Army-managed program support costs—$4.2 million, based on our computations. Therefore, we believe that the Navy's request could be reduced by $1.6 million—$7.4 million minus $5.8 million for additional hardware and support costs.

The Navy representative responsible for the Hellfire budget does not agree that the Navy's request necessarily contains any surplus. He believes that the Navy and the Army could incur additional costs by procuring different versions of the missile. But he acknowledged that he is unable to justify an alternative position at this time.

Spares and Repair Parts

Spares and repair parts fall into four categories—initial provisions, replenishments, war reserves, and reimbursables. Initial provisions are spares required to support systems when they are initially fielded; replenishment spares are required to resupply initial stocks or to increase stocks for fielded items; war reserve spares are those critical to maintaining and sustaining combat operations until resupply can be accomplished; and reimbursable spares are those for which the Missile Command is reimbursed from foreign military sales and other DOD customers.

The Army requested $247.5 million for fiscal year 1990 to procure missile spares and repair parts—$110.4 million for initial spares, $135.5 million for replenishment spares, and $1.6 million for war reserves. We believe that the Army's fiscal year 1990 request could be reduced by up to $75.3 million and the fiscal year 1989 budget could be reduced by up to $3.1 million.

Fiscal Year 1990 Budget Request

The fiscal year 1990 budget request can be reduced by $66 million because the Army no longer requires the number of spares it requested. In July 1989, the Army Missile Command reduced its fiscal year 1990 missile spares requirements by $66 million—$16.7 million for initial spares and $49.3 million for replenishment. The reduction was based upon a revised requirements assessment, which considered lower stockage factors, as directed by the Army Materiel Command, and more current unit price information.

In addition, the Army's revised requirement includes $9.3 million for initial spares that will not be needed if the Committees make the potential reductions discussed earlier in this report. This reduction includes (1) $6 million in spares related to the fiscal year 1990 program for modifying older MLRS launchers and (2) $3.3 million in spares related to 50 Pedestal Mounted Stinger fire units and launchers. If these items are not funded, the spares will not be required.

Missile Command officials responsible for spares requirements agreed with the facts as we have presented them. However, they stated that the Army plans to reprogram $66 million—$37.4 million for war reserves and $28.6 million for fiscal year 1991 unfunded requirements. Even so, we noted that the war reserve requirement existed at the time of the Army's budget submission to OSD, but the Army apparently did not consider that the relative need justified a request. In addition, we believe that funding requirements for fiscal year 1991 should not be requested before they are needed.

Fiscal Year 1989 Budget

We believe that the fiscal year 1989 budget for initial spares could be reduced by $3.1 million if the Committees defer the fiscal year 1989 program for modifying older MLRS launchers. The Army will not require these spares until the modification program is implemented.

Hawk

The fiscal year 1990 budget request includes $55.4 million to purchase 358 Hawk missiles for the Army. The Hawk is a surface-to-air missile system designed to defend against enemy aircraft flying at low to medium altitudes. The system, which is located in the rear combat areas, includes a command post, radar stations, launchers, and missiles. It is used by Army, Marine Corps, and NATO forces to protect ground forces and high-value assets such as bases and logistics complexes.

The Army has not procured Hawk missiles for its use since 1980, but the Army has continued to procure missiles with Navy funds for the Marine Corps. In 1988 it negotiated a Hawk Missile multiyear contract for fiscal years 1988 to 1991 for the Marine Corps. However, the Navy did not request Hawk missile funding in its fiscal year 1990 budget submission to the Office of the Secretary of Defense (OSD).

The Army did not request Hawk missile funding in its fiscal year 1990 budget submission to OSD because the Army did not believe that the need for additional Hawk missiles warranted a request for funding in light of

other competing funding priorities. A subordinate command requested Hawk missile funding in its request to the Department of the Army, but the Army chose not to include funding for the missiles in its submission to OSD. Subsequent to the services' submissions, OSD added the missiles to the Army's request based on a comparison of Army and Marine Corps inventories to their acquisition objectives. OSD concluded that the Army had the greater need for the additional missiles. However, OSD did not assess the Army's relative need for the missiles compared to its other priorities.

According to the acting project manager, the Army needs the missiles to equip three new National Guard units and to resupply the Army's inventory, which is decreasing due to training, testing, and accidents. He added that the Army could buy the missiles at an advantageous price under the terms of the multiyear contract and that cancellation of the contract would result in a cancellation charge of up to $12.4 million. In addition, he stated that canceling the contract would involve a loss of $58.6 million in advance materials procured earlier—$24.4 million procured for the 1990 buy and $34.2 million for the 1991 buy.

The Army's projected inventory is less than its acquisition objective, and the multiyear contract may offer an advantageous price compared to prices available for later procurement. The basis for the need—the activation of the National Guard units and the declining inventory—has not changed since the Army prepared its budget and submitted it to OSD, choosing not to request the missiles. Concerning advanced procurement items, according to the contracting officer, some items could be made available for spare parts for existing Army missiles, and others could be made available for foreign military sales on a reimbursable basis.

Objectives, Scope, and Methodology

Our objectives were to (1) review DOD's fiscal year 1990 budget requests for selected Army missile systems to determine whether the missile programs should be funded in the amounts requested and (2) examine selected segments of prior-year appropriations for some systems to determine whether unused funds could be reduced. However, we did not attempt to (1) identify internal control weaknesses related to overstated budgets or (2) make recommendations to prevent their recurrence.

We examined selected aspects of the budget justifications for procurement and research and development funding for 13 Army missile systems: the AAWS-M, the Patriot, the MLRS, the Stinger, the Pedestal Mounted Stinger, the Non-Line-of-Sight missile, the Hellfire, the Chaparral, the Line-of-Sight Forward Heavy weapon system, the TOW-2, the Army Tactical Missile, the Multiple Launch Rocket System-Terminal Guidance Warhead, and the Hawk. We also examined selected segments of the Army's budget request for missile spares and repair parts and the Navy's request for the Hellfire.

In evaluating the budget requests, we examined (1) production plans, delivery plans, improvement plans, and effectiveness analyses to determine whether planned production is warranted; (2) test reports and missile delivery status to evaluate the effect of production problems on missile delivery; and (3) the requirements for selected missiles, support equipment, and spares. In addition, we reviewed selected aspects of missile costs by examining the services' methodology in arriving at those costs, by determining the most recently experienced costs, and by examining recently awarded contracts. Also, for selected systems, we reviewed the status of obligations for previously appropriated funds and the plans to obligate these funds. Because of limited time, we did not examine each of these aspects for all weapon systems. Rather, we tailored our review of each system to examine items that appeared to have the most potential for reduction, and we identified potential reductions for seven missile systems and spares.

We performed our work primarily at the U.S. Army Missile Command, Huntsville, Alabama, from October 1988 through July 1989. Our scope of work and analyses were more limited than anticipated because detailed budget requests were not provided until May 8, 1989. As a result, we relied substantially on testimonial evidence. However, when practicable, we corroborated this evidence with other sources or verified the evidence a second time with the same source. We conducted our work in accordance with generally accepted government auditing standards.

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