



National Security and
International Affairs Division

B-279578

August 14, 1998

Congressional Committees

Subject: 1999 DOD Budget: DOD's Procurement and RDT&E Programs

We examined the Department of Defense's (DOD) fiscal year 1999 budget request and prior years' appropriations for selected procurement and research, development, test, and evaluation (RDT&E) programs. Our objectives were to identify potential reductions in the fiscal year 1999 budget request and potential rescissions to prior years' appropriations.

This letter summarizes and updates information provided to your staffs from April through June 1998. It does not reflect any adjustments that may have been taken by the authorizing and appropriating committees during their reviews of the fiscal year 1999 defense budget request. We have not acknowledged these committees' actions because, in some cases, House and Senate actions have varied and conference actions are still pending.

We identified opportunities to reduce fiscal year 1999 procurement and RDT&E requests by about \$6.3 billion and to rescind prior years' procurement and RDT&E appropriations by \$99 million. These reductions and/or rescissions can be made because schedules have slipped, requirements have changed, and issues affecting program funding have emerged since the budget request was developed. The potential rescissions include \$75 million in prior years' appropriations for which obligational authority expires on September 30, 1998. DOD has requested congressional approval to reprogram some of these excess funds in its fiscal year 1998 omnibus reprogramming request.

PROCUREMENT APPROPRIATIONS

As shown in table 1, we identified about \$5.2 billion in potential reductions to DOD's fiscal year 1999 procurement budget request and about \$17.3 million in potential rescissions from DOD's prior years' procurement appropriations.

Table 1: Potential Reductions and Rescissions to Procurement Programs

Dollars in millions

	Potential fiscal year 1999 reduction	Potential prior year rescission
Army	\$509.283	0
Navy	3,580.489	0
Air Force	987.769	\$17.275
Defense-wide	94.000	0
Total	\$5,171.541	\$17.275

Of the \$17.3 million in potential rescissions from prior year's appropriations, \$8.3 million is from expiring excess fiscal year 1996 funds. Details regarding the potential reductions and rescissions to procurement programs are provided in appendix I.

RDT&E APPROPRIATIONS

As shown in table 2, we identified \$1.1 billion in potential reductions to DOD's fiscal year 1999 RDT&E budget requests and \$81.7 million in potential rescissions from DOD's prior years' RDT&E appropriations.

Table 2: Potential Reductions and Rescissions to RDT&E Programs

Dollars in millions

	Potential fiscal year 1999 reduction	Potential prior year rescission
Army	\$144.738	\$15.000
Navy	251.061	0
Air Force	370.901	0
Defense-wide	350.000	66.737
Total	\$1,116.700	\$81.737

Of the \$81.7 million in potential rescissions from prior years' appropriations, \$66.7 million is from expiring excess fiscal year 1997 funds. Details regarding these potential reductions and rescissions are provided in appendix II.

AGENCY COMMENTS

Commenting orally on a draft of this letter, DOD disagreed with many of the potential reductions and rescissions identified. In many instances, DOD believed that the funds could be used for other requirements. We have incorporated DOD's comments on specific programs throughout appendixes I and II.

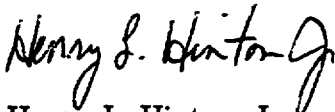
SCOPE AND METHODOLOGY

To identify potential reductions and rescissions, we focused on budget line items with unobligated funds and funds on withhold in addition to program cost, schedule, and performance issues. A budget line number is a designation of a specific program/system within the defense budget. We examined expenditure documents to determine whether requests were adequately justified and whether unobligated funds from prior appropriations should be retained. We obtained status updates from program officials, discussed issues identified, and obtained their position on proposed reductions and/or rescissions. Appendix III provides more information regarding our scope and methodology.

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We are sending copies of this report to the Secretaries of Defense, the Army, the Navy, and the Air Force and the Director, Office of Management and Budget. We will also make copies available to others upon request.

This letter was prepared under the direction of Louis J. Rodrigues, Director, Defense Acquisitions Issues, who may be reached on (202) 512-4841 if you or your staffs have any questions. Other major contributors are listed in appendix IV.



Henry L. Hinton, Jr.
Assistant Comptroller General

List of Congressional Committees

The Honorable Strom Thurmond
Chairman

The Honorable Carl Levin
Ranking Minority Member
Committee on Armed Services
United States Senate

The Honorable Ted Stevens
Chairman

The Honorable Daniel K. Inouye
Ranking Minority Member
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Committee on Appropriations
United States Senate

The Honorable Floyd D. Spence
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The Honorable Ike Skelton
Ranking Minority Member
Committee on National Security
House of Representatives

The Honorable C. W. Bill Young
Chairman

The Honorable John P. Murtha
Ranking Minority Member
Subcommittee on National Security
Committee on Appropriations
House of Representatives

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Abbreviations

DOD	Department of Defense
RDT&E	research, development, test, and evaluation

**POTENTIAL REDUCTIONS AND RESCISSIONS TO
PROCUREMENT PROGRAMS**

The Department of Defense (DOD) requested \$48.7 billion in procurement funding for fiscal year 1999. As shown in table L1, our review of selected budget line items in the request and prior years' appropriations identified potential reductions of about \$5.2 billion to the fiscal year 1999 request; potential rescissions of \$8.9 million and \$41,000 from fiscal year 1998 and 1997 appropriations, respectively; and a potential rescission of \$8.3 million from expiring fiscal year 1996 appropriations.

Table L.1 Potential Reductions and Rescissions to Procurement Programs

Dollars in millions

	Fiscal year 1999		Potential rescission		
	Request	Potential reduction	Fiscal year 1998	Fiscal year 1997	Fiscal year 1996
Army	\$9,028.100	\$509.283	0	0	0
Navy	20,160.100	3,580.489	0	0	0
Air Force	17,474.800	987.769	\$8.934	\$0.041	\$8.300
Defense-wide	2,041.700	94.000	0	0	0
Total		\$5,171.541	\$8.934	\$0.041	\$8.300

ARMY PROCUREMENT PROGRAMS

The Army requested \$9 billion for procurement programs in fiscal year 1999. As shown in table L2, we identified potential reductions of about \$509.3 million to the fiscal year 1999 request.

Table I.2: Potential Reductions to Army Procurement Programs

Dollars in millions

Procurement appropriation	Fiscal year 1999	
	Request	Potential reduction
Procurement (inflation adjustment)	\$9,028.100	\$325.000
Missile	1,205.800 ^a	126.230
Weapons and Tracked Combat Vehicles	1,433.600 ^a	16.952
Other	3,198.800 ^a	41.101
Total		\$509.283

^aThis amount is part of the Army's procurement request of \$9,028.1 million.

Procurement, Army

Inflation Adjustment

If the Congress does not approve DOD's reprogramming request for \$103.3 million of fiscal year 1998 funds, the Army's fiscal year 1999 procurement budget request of \$9 billion can be reduced by \$325 million because fiscal year 1999 program requirements are overstated by \$213 million and \$112 million in fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

The administration's current inflation forecast indicates that projected levels of inflation for fiscal years 1999 and 1998 are lower than previously forecasted. According to DOD, the inflation reductions in the Army's procurement accounts are about \$213 million and \$112 million in fiscal years 1999 and 1998, respectively. The fiscal year 1998 DOD omnibus reprogramming request includes \$103.3 million from the fiscal year 1998 inflation adjustment. According to DOD, the remaining \$8.7 million in fiscal year 1998 funds was applied to a critical Information Security effort; however, documentation was not available so we could not verify this information. DOD did not agree with the reduction stating that it plans to use these funds for other program priorities that were previously unfunded. Since program requirements have been reduced based on a lower than projected inflation rate, we continue to believe that the \$213 million can be reduced from the fiscal year 1999 budget request and \$112 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

Missile Procurement, Army

The Army requested \$1.2 billion for missile procurement programs in fiscal year 1999. As shown in table I.3, we identified potential reductions of \$126.2 million to the fiscal year 1999 request.

Table I.3: Potential Reductions to Army Missile Procurement Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999	
		Request	Potential reduction
3	Hellfire System Summary	\$360.600	\$121.200
9	Army Tactical Missile System (ATACMS) - System Summary	90.600	5.030
	Total		\$126.230

Hellfire System Summary (Line 3)

The Army's fiscal year 1999 budget request of \$360.6 million for the Hellfire System can be reduced by \$121.2 million if missile buys are maintained at the fiscal year 1998 level and the planned multiyear contract is delayed until the Army's plans regarding how many Apache Longbow helicopters it will acquire are stabilized.

The fiscal year 1999 budget request includes \$302 million to purchase 2,000 Longbow Hellfire missiles and an additional \$44.3 million for advanced procurement. The 2,000 missile procurement is the first year of a proposed 5-year multiyear contract for a total of 10,397 missiles. However, the Army plans to reduce the number of Apache Longbow helicopters it will acquire from 758 to around 500; therefore, it will need fewer missiles. Thus, it does not appear reasonable to increase the missile procurement level for fiscal year 1999 beyond the fiscal year 1998 level or award the multiyear contract until procurement plans for the Apache Longbows stabilize. Holding to this level will reduce the fiscal year 1999 quantity by 900 missiles. Using fiscal year 1998 pricing, this equates to a \$76.9-million reduction in fiscal year 1999 requirements. Additionally, if a multiyear contract is not signed, the Army's request of \$44.3 million for advance procurement can be reduced because it will not be needed.

According to program office officials, if the funding request for the multiyear contract is not approved, the projected unit price may be affected. In addition, according to Army headquarters officials, while the additional 10,397 missiles will be more than the number needed to support the reduced Apache Longbow helicopter requirement, analyses are ongoing to determine if the additional missiles can be used in the future by a helicopter system being developed. Since the approved multiyear quantity for Apache Longbow missiles was based only on Apache Longbow requirements and this requirement has been reduced, we believe that the fiscal year 1999 missile budget request can be reduced by \$121.2 million.

DOD did not agree with the reduction, stating that it would preclude the Army from initiating a multiyear contract for the Longbow Hellfire missiles. We continue to believe that until the Army finalizes its plans for the Apache Longbow helicopter and they are approved by DOD, the procurement quantity should be restricted to the current levels.

Army Tactical Missile System (ATACMS) - System Summary (Line 9)

The Army's fiscal year 1999 budget request of \$90.6 million for the Army Tactical Missile System block IA can be reduced by \$5.03 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements.

The Army's fiscal year 1998 appropriations included \$71.6 million for 100 missiles. The contractor's May 14, 1998, firm fixed-price contract proposal contains a cost of \$58.23 million for the 100 missiles, \$13.37 million less than budgeted. The Army has obligated \$5.24 million to acquire nine additional missiles and reprogrammed \$3.1 million, leaving \$5.03 million. Program officials maintain that they plan to use the remaining \$5.03 million for engineering services and to purchase additional test equipment during fiscal year 1999. We believe that based on negotiating history, savings will probably result from the fiscal year 1999 negotiations to cover the engineering services and testing equipment costs. Therefore, the \$5.03 million of the fiscal year 1998 appropriations can be used to offset the fiscal year 1999 budget request.

Procurement of Weapons and Tracked Combat Vehicles, Army

The Army requested \$1.4 billion for weapons and tracked combat vehicles procurement programs in fiscal year 1999. As shown in table I.4, we identified about \$17 million in potential reductions to the fiscal year 1999 request.

Table I.4: Potential Reductions to Army Procurement of Weapons and Tracked Combat Vehicles Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999	
		Request	Potential reduction
9	Carrier, Modification	\$54.454	\$5.000
18	M1 Abrams Tank Modification	53.301	5.252
19	Abrams Upgrade Program	412.700	6.700
	Total		\$16.952

Carrier, Modification (Line 9)

The Army's fiscal year 1999 budget request of \$54.5 million for carrier modification can be reduced by \$5 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements. DOD is withholding these funds, added to the program last year, for potential reprogramming. Program officials stated that of the \$5 million was to upgrade the M113 A2 to the A3 configuration. DOD and the Army did not agree with the reduction. DOD stated that the Army has requested reprogramming of these funds to research, development, test, and evaluation (RDT&E) to initiate a reactive armor program. Since the \$5 million will not be used as planned for carrier modification, these fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

M1 Abrams Tank Modification (Line 18)

The Army's fiscal year 1999 budget request of \$53.3 million for the M1 Abrams Tank modification can be reduced by \$5.252 million because an equivalent amount of fiscal year 1997 funds is available to meet fiscal year 1999 program requirements. The \$5.252 million for the procurement of the M1A1 Driver's Hatch Interlock kits is not needed for the fiscal year 1997 buy due to favorable negotiations completed in fiscal year 1998.

According to program officials, the program office wants to use the \$5.252 million to support a competitive contract award for the next procurement of the kits in fiscal year 1999. The fiscal year 1999 budget request includes \$5.8 million to procure the kits. The officials said these additional funds would enhance their ability to attract

interested vendors because a larger quantity buy may be offered for competitive bids. They noted that with the most recent buy, only 2,435 kits have been procured toward a total requirement of 5,580. However, the fiscal year 1998 buy will not occur as planned, and the next kit buy will be in fiscal year 1999. DOD did not agree with the reduction reiterating that the Army wants to use these funds to increase the Army's planned buy in fiscal year 1999. Since the \$5.252 million is not needed for the kits under the most recent buy, these fiscal year 1997 funds can be used to offset the fiscal year 1999 budget request.

Abrams Upgrade Program (Line 19)

The Army's fiscal year 1999 budget request of \$412.7 million for the Abrams Upgrade Program can be reduced by \$6.7 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements.

The Army is withholding \$6.7 million of fiscal year 1998 funds pending approval of the program office's request to reprogram the funds from this line to the M1 Abrams Tank Modification program (line 18) to procure M1A1-D integration kits. However, the House Committee on National Security recently recommended that this digitization effort not be funded in fiscal year 1999. Program officials stated that if the \$6.7 million is not reprogrammed, it could be used in the Abrams Upgrade Program to satisfy a potential shortfall for system technical support. DOD did not agree with the reduction, reiterating the Army's position to use these funds for technical support. However, the potential shortfall was not of sufficient importance to preclude the program office from requesting that these funds be reprogrammed. Therefore, since the Army currently does not plan to use the \$6.7 million in fiscal year 1998 funds for the upgrade program, we continue to believe that these funds can be used to offset the fiscal year 1999 budget request.

Other Procurement, Army

The Army requested \$3.2 billion for other procurement programs in fiscal year 1999. As shown in table I.5, we identified potential reductions of \$41.1 million to the fiscal year 1999 request.

Table I.5: Potential Reductions to Army Other Procurement Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999	
		Request	Potential reduction
13	Medium Truck Extended Service Program (ESP)	\$37.247	\$10.819
15	High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) Extended Service Program (ESP)	24.832	24.832
102	Gun Laying and Positioning System (GLPS)	11.800	5.450
	Total		\$41.101

Medium Truck Extended Service Program (ESP) (Line 13)

The Army's fiscal year 1999 budget request of \$37.2 million for the Medium Truck Extended Service Program can be reduced by \$10.819 million because program requirements are overstated. Requirements are overstated because on May 27, 1998, the Army notified contractors that due to budget limitations, it will not include the 5-ton truck portion of the remanufacture program in the final request for proposal or the source selection process for the program. A program official agreed with the information presented. However, he said that the Army canceled this portion of the program with the intent of transferring the funds to the Family of Medium Tactical Vehicles Program. Since the Army does not intend to pursue the remanufacture of 5-ton trucks at this time, the fiscal year 1999 budget request can be reduced by \$10.819 million. DOD did not disagree with this reduction.

High Mobility Multi-Purpose Wheeled Vehicle (HMMWV) Extended Service Program (ESP) (Line 15)

The Army's fiscal year 1999 budget request of \$24.832 million for the High Mobility Multi-Purpose Wheeled Vehicle-Extended Service Program can be denied because program requirements are overstated. The Army has delayed the start of the program beyond fiscal year 1999. According to a program official, the Army wants to use the requested funds to buy about 328 high mobility multipurpose wheeled vehicles if the fiscal year 1999 funding is appropriated. However, funding for these vehicles was not

of sufficient priority to be included in the President's fiscal year 1999 budget request. DOD acknowledged delays in this program and said that the Army is requesting approval to buy additional vehicles. We continue to believe that since the Army does not plan to start the extended service program in fiscal year 1999, the \$24.832 million budget request can be denied.

Gun Laying and Positioning System (GLPS) (Line 102)

The Army's fiscal year 1999 budget request of \$11.8 million for the Gun Laying and Positioning System can be reduced by \$5.45 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements. The system scheduled to enter production in fiscal year 1998 has slipped to fiscal year 1999 and is not a high priority for the first digitized division.

According to the program manager, testing will not be completed until September 1998, and the test evaluator will not provide its report until January 1999. The milestone III production decision is scheduled for March 1999; therefore, procurement funds will not be needed until some time after that decision point. Since the system cannot enter production until April 1999 at the earliest, the initial procurement can be postponed until fiscal year 1999. Also, the second production contract, which was to be funded in fiscal year 1999, can be deferred until fiscal year 2000.

The program manager stated that funding for hardware procurement could be delayed until February 1999, with no impact to the fielding schedule. However, he stated that he would need about \$0.35 million to maintain the program through February 1999. DOD did not agree with the reduction stating, that the program is ready to proceed as planned. However, we continue to believe that testing should be completed before the system enters production; therefore, since the \$5.45 million in fiscal year 1998 funds is not needed for the system, these funds can be used to offset the fiscal year 1999 budget request.

NAVY PROCUREMENT PROGRAMS

The Navy requested \$20.2 billion for procurement programs in fiscal year 1999. As shown in table I.6, we identified potential reductions of about \$3.6 billion from the fiscal year 1999 request.

Table I.6: Potential Reductions to Navy Procurement Programs

Dollars in millions

Procurement appropriation	Fiscal year 1999	
	Request	Potential reduction
Procurement (inflation adjustment)	\$20,160.100	\$711.900
Aircraft	7,466.700 ^a	2,787.800
Weapons	-1,327.500 ^a	11.589
Other	3,937.700 ^a	70.100
Total		\$3,580.489

^aThis amount is part of the Navy's procurement request of \$20,160.1 million.

Procurement, Navy

Inflation Adjustment

The Navy's fiscal year 1999 procurement budget request of \$20.2 billion can be reduced by \$711 million because fiscal year 1999 program requirements are overstated by \$470 million and \$241 million in fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

The administration's current inflation forecast indicates that projected levels of inflation for fiscal years 1999 and 1998 are lower than previously forecasted. According to DOD, the inflation reductions in the Navy's procurement accounts are about \$470 million and \$241 million in fiscal years 1999 and 1998, respectively. DOD did not agree with the reductions, stating that it plans to use these funds for program priorities that were previously unfunded. Since program requirements have been reduced based on a lower than projected inflation rate, we continue to believe that \$470 million can be reduced from the fiscal year 1999 budget request and \$241 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

Aircraft Procurement, Navy

The Navy requested \$7.5 billion for aircraft procurement programs in fiscal year 1999. As shown in table I.7, we identified a potential reduction of about \$2.8 billion to the fiscal year 1999 request.

Table I.7: Potential Reduction to Navy Aircraft Procurement Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999	
		Request	Potential reduction
4	F/A-18E/F (Fighter) Hornet	\$2,787.800	\$2,787.800
	Total		\$2,787.800

F/A-18E/F (Fighter) Hornet (Line 4)

The Navy's fiscal year 1999 budget request of approximately \$2,787.8 million for the F/A-18E/F program could be denied because the impact that planned design changes to solve performance problems will have on other operational performance parameters such as range, acceleration, and radar signature will not be known until the end of 1999. Continuing with the Navy's current acquisition strategy could result in the Navy equipping its carriers with an E/F aircraft with performance deficiencies that make it a marginal improvement over the best performing C/D aircraft that are currently in the fleet. The Navy could be directed to (1) restructure its E/F low-rate initial production program so that the funds appropriated for fiscal year 1998 are used to buy a total of 20 aircraft under the second and third low-rate initial production procurements and (2) retain its option to procure additional F/A-18C/D aircraft if the E/F does not demonstrate through operational flight testing that it will provide significant performance improvements. This approach would ensure that the Navy selects the most cost-effective acquisition strategy for providing aircraft to the fleet until the Joint Strike Fighter becomes operationally available.¹

The Navy plans to procure 62 low-rate initial production aircraft in three separate procurement lots of 12, 20, and 30 aircraft. The first 12 aircraft are on contract. The Congress appropriated \$2.1 billion for the second lot of low-rate initial production aircraft, but DOD withheld the funds for those aircraft pending resolution of a wing problem. The wing problem initially resulted in an unpredictable rocking of the aircraft when it was flying at the altitude and speed at which air-to-air combat maneuvers are expected to occur. DOD now states that the Navy has demonstrated a solution for the wing drop problem. As a result, and with the Secretary of Defense's

¹Navy Aviation: F/A-18E/F Will Provide Marginal Operational Improvement at High Cost (GAO/NSIAD-96-98, June 18, 1996).

concurrency, the Navy is proceeding with the full funding for the second lot of low-rate initial production aircraft. However, the Navy's most promising solution to the wing problem (a porous fairing that has many small holes that influence the airflow over the wing) causes unacceptable airframe buffeting. On March 25, 1998, the Director, Operational Test and Evaluation, testified before the Airland Subcommittee of the Senate Committee on Armed Services that the final solution to the problem may also include a combination of modified flap scheduling programs and small stall strips on the upper and lower wing surfaces. According to the Director, the root cause of the problem and subsequent modifications to the design are still being investigated. He also noted that the configuration of the porous wing fairing flown during developmental testing, and to be flown by the operational test pilots, does not incorporate the production representative wing fold mechanism. The airflow characteristics of a production representative wing fold fairing may be different than the hardware that has been tested to date, according to the Director. He said further that DOD will not have a complete understanding of the impact of the wing design fix until the completion of operational testing at the end of 1999.

While the wing design problem has been the most widely discussed challenge facing the E/F program, numerous additional concerns have been identified during the test program. The Director, Operational Test and Evaluation, discussed some of these concerns at the March 25, 1998, Senate hearing. For example, he stated that:

- Concerns with electronic warfare systems are the greatest issues related to operational mission performance. The performance of the Radar Warning Receiver, as installed in the E/F with its required antenna configuration, particularly in relation to its performance in the F/A-18C/D, has not been demonstrated. Accurate threat radar identification and direction of the threat are key factors in providing the pilot with the situational awareness needed to effectively employ both offensive and defensive tactics. Therefore, concerns about the potential performance of the radar warning system in the E/F make it a high-risk item.
- Testing to date indicates that the tow cable for the ALE-50 towed decoy is being burned off by engine exhaust under certain conditions. The towed decoy will provide endgame protection against certain threat missiles not available to the C/D, but concerns about the ALE-50 performance make it a high-risk item.
- Deficiencies related to radar performance in a jamming environment and the Targeting Forward Looking Infrared Radar have been identified in previous testing and operational use of the F/A-18C/D, and similar performance deficiencies are expected in the E/F. Long-term solutions to these deficiencies are being addressed with separate hardware upgrade programs.

- The proposed wing design fixes may cause air flow turbulence around the weapons pylons that was not present during earlier weapons separation testing. The Director stated that it would be prudent to do some regression testing to verify that the weapons separation characteristics have not been altered by the porous fairing solution.

The Navy maintains that its current F/A-18E/F acquisition strategy should continue. We believe that DOD and the Navy need to adopt a more cautious approach. The deficiencies being identified by the E/F test program indicate that the Navy should reconsider its plans to increase production of the E/F during the low-rate initial production phase of the program. Instead of funding the Navy's fiscal year 1999 budget request for the third lot of 30 low-rate initial production aircraft, the Navy could restructure its E/F low-rate initial production program so that the funds appropriated for fiscal year 1998 are used to buy a total of 20 aircraft under the second and third low-rate initial production procurement lots. This approach would provide 32, instead of 62, low-rate initial production aircraft and could preclude the potential for a costly retrofit program to correct deficiencies on a large number of aircraft procured before the final corrections of deficiencies are demonstrated through operational flight testing.

DOD did not agree with this reduction. While recognizing that issues with the systems on the aircraft need to be addressed and resolved, it contends there are no issues that should affect the procurement of the aircraft. DOD said that the wing design problem is the only one that can impact the aircraft; however, it believes the wing design problem has been fixed. The Navy stated that its Operational Test and Evaluation Force Command reported that its tests show the problem has been fixed; however, as of August 14, 1998, we were unable to confirm this because the Navy had not provided the test results for our evaluation as we requested. Therefore, if the fiscal year 1998 funding is used to procure low-rate initial production aircraft in fiscal years 1998 and 1999, the \$2,787.8 million fiscal year 1999 budget request could be denied.

Weapons Procurement, Navy

The Navy requested \$1.3 billion for weapons procurement programs in fiscal year 1999. As shown in table L8, we identified potential reductions of about \$11.6 million.

Table I.8: Potential Reductions to Navy Weapons Procurement Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999	
		Request	Potential reduction
6	Advanced Medium Range Air-to-Air Missile (AMRAAM)	\$62.600	-\$1.700
8	Standard Missile	225.700	9.889
	Total		\$11.589

Advanced Medium Range Air-to-Air Missile (AMRAAM) (Line 6)

The Navy's fiscal year 1999 budget request of \$62.6 million for the Advanced Medium Range Air-to-Air Missile can be reduced by \$1.7 million. Approximately \$1.7 million of fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

On October 15, 1997, the Air Force, as lead agency, signed a price agreement for the next 3 years of production capitalizing on the anticipated merger of Raytheon Company and Hughes Aircraft Company. On the basis of this agreement, the Air Force awarded a contract to Raytheon Missile Systems Company on April 13, 1998. The Navy, recognizing the anticipated negotiated savings from the fiscal year 1999 contract, increased its planned missile buy by 15. In fiscal year 1998, the Navy requested \$31.7 million to procure 100 missiles, but due to favorable contract negotiations, it procured 120 missiles for \$30 million. Since the \$1.7 million is not required for the fiscal year 1998 missile buy, these funds can be used to offset the fiscal year 1999 request.

Standard Missile (Line 8)

The Navy's fiscal year 1999 budget request of \$225.7 million for the Standard Missile can be reduced by \$9.889 million because the procurement of block IVA missiles is uncertain and would be premature. The fiscal year 1999 planned buy includes 45 block IV missiles or a combination of block IV and block IVA missiles if the first two test flight engagements of the block IVA are successful. This reduction represents support costs for the Standard Missile block IVA variant.

The compressed test and production schedules for the block IVA are optimistic because developmental work still needs to be completed. A DOD test and evaluation expert questioned the test schedule, noting that it is not realistic to expect two back-to-back test flights to occur without problems, especially in a new variant. This variant is a missile with new components and capabilities that have not been perfected. He stated that if problems do occur, as recently experienced on other missile defense programs, there is no time in the schedule for analyzing and correcting any problems, including retesting, prior to entering production.

In our November 1997 report² on the Navy Area Theater Ballistic Missile Defense program, we pointed out that the Navy's plan to contract for block IVA missiles prior to the completion of any realistic operational testing is risky. If the Navy accelerates production of the block IVA missile, that the Navy could make a premature commitment to the production of unproven missiles. This type of concern was echoed in a February 27, 1998, report entitled Panel on Reducing Risk in Ballistic Missile Defense Flight Test Programs. According to the Panel's report, the mindset that risky key demonstration tests can provide readiness for early deployment is an unwarranted departure from the test paradigm that has proven to be successful in other complex programs. Under this "key demonstration" approach, a single success is regarded as a large step forward and becomes the criterion for a key program decision, such as exercising an option to buy operational missiles. The Panel also pointed out that the strategy of accepting a high level of risk to shorten schedule time has been counterproductive, as proven in both the Army's Theater High-Altitude Area Defense and PATRIOT PAC-3 systems.

Navy officials told us that they plan for success and are optimistic about completing scheduled tests. These officials consider the risk moderate and anticipate transitioning to block IVA production in fiscal year 1999. According to program officials, the program schedule, while categorized as moderate risk, mitigates that risk through rigorous ground and land-based flight test programs prior to the low-rate initial production decision, and more fundamentally, achieves theater ballistic missile defense capabilities through modifications to proven fielded systems that are inherently more stable than "new start developments." In response to the Panel's report, the developmental testing/operational assessment has been restructured to include additional hardware and an additional flight, and expanded the schedule while remaining within the Acquisition Program Baseline parameters. Program officials also stated that since there is little flexibility in the support lines of the Standard Missile budget request, reducing the funds by \$9.889 million while maintaining the program

²Ballistic Missile Defense: Improvements Needed in Navy Area Acquisition Planning (GAO/NSIAD-98-34, Nov. 14, 1997).

schedule would result in reduced fiscal year 1999 Standard Missile procurement quantities. In their opinion, this would aggravate an already tenuous situation where missile procurement quantities are at historic lows and would result in high unit costs, loss of vendor-subvendor base, and an increase incidence of obsolete parts issue.

According to these officials, if the \$9.889 million is reduced from the budget, it will preclude the production of block IVA missiles. However, to enter production, the block IVA missile must (1) complete development and (2) successfully complete two flight engagement tests. The combined developmental and operational tests are scheduled to begin in November 2000. Given the difficulty of integrating these new capabilities into the program, minimal or compressed testing is risky and can lead to delays and increased costs.

We continue to believe that since the procurement of the Standard Missile block IVA is uncertain and would be premature, the \$9.889 million can be reduced from the fiscal year 1999 budget request without affecting the program's ability to procure the planned block IV quantities.

Other Procurement, Navy

The Navy requested \$3.9 billion for other procurement programs in fiscal year 1999. As shown in table I.9, we identified \$70.1 million in potential reductions to the fiscal year 1999 request.

Table I.9: Potential Reductions to Navy Other Procurement Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999	
		Request	Potential reduction
42	AN/SQQ-89 Surface Antisubmarine Warfare (ASW) Combat System	\$27.400	\$7.800
66	Cooperative Engagement Capability	47.300	47.300
157	Anti-Ship Missile Decoy System	21.504	15.000
	Total		\$70.100

**AN/SQQ-89 Surface Antisubmarine Warfare (ASW)
Combat System (Line 42)**

The Navy's fiscal year 1999 request of \$27.4 million for major upgrades to the AN/SQQ-89 surface antisubmarine warfare combat system can be reduced by \$7.8 million. The block I and block II upgrades, intended to improve shallow water capabilities, will not be fully integrated into the existing combat system and will require additional processors and displays. In addition, the block II Echo Tracker Classifier is still under development with no assurance, at this time, that it will meet performance requirements in an operational environment. These upgrades may not be suitable for DDG-51 ships, and the Navy plans to replace them with a fully integrated system beginning in 2005.

The Navy's position is that the block I Multi-Sensor Torpedo Alertment Processor is an integrated system, rather than a stand alone system. Navy officials said that an operational test and evaluation report noted that a fully integrated system would be potentially operationally suitable. However, a fleet evaluation showed that because the upgrades are not integrated, the block I configuration may not be effective or suitable for DDG-51 AEGIS destroyers. For example, it will increase the number of operators required and will not provide a complete tactical picture to commanders during the war-fighting process. In addition, using the overlay, instead of a fully integrated approach, will duplicate ship-board functions and increase maintenance and operator workload, according to a Navy official. Finally, Navy documentation shows that there is a need to reduce the weight and volume of antisubmarine warfare systems on ships. However, the block I and II upgrades will increase ship-board space requirements and weight because the Navy's approach of overlaying instead of fully integrating new capabilities with the SQQ-89 existing system architecture requires additional processors and displays.

The Navy acknowledges that the prime contractor is still developing the block II tracker. The contractor still needs to convert algorithms from laboratory development models into a real-time, real world production system, which is an ongoing process, and tests have not been conducted to determine its effectiveness under realistic operational conditions. Until it proves operationally effective, it seems premature to seek procurement funds for this system. Navy documentation shows that the tracker will also require an additional adjunct processor.

The Navy stated that the block I and II upgrades are incremental and will facilitate the development of a fully integrated SQQ-89 (V)15 plus a multifunction towed array. Under the original program, the Navy intended to develop a block III system based on blocks I and II. However, the Navy abandoned this approach in March 1997 in favor

of developing a new, fully integrated SQQ-89 (V)15 combat system plus the multi-function towed array for backfit on all DDG-51 ships. According to Navy documentation, block III was abandoned because there would be five different system variants on DDG-51 ships alone, it would be too costly, and it would further increase space and manning requirements.

The Navy said that reducing the budget request will delay introduction into the fleet of an effective torpedo defense system for DDG-51 destroyers, delay the block II upgrade at least a year, and cause the entire DDG-51 upgrade program to be replanned. Integration of these upgrades on the DDG-51 is a complicated issue because of the Aegis combat system and the space, weight, and crew concerns involved with adding an adjunct processor and display. Further, if the Navy plans to install these upgrades on the DDG-51 without a towed array, a critical element of the upgrade would be missing. The Navy plans to equip all DDG-51 ships with a new fully integrated off-the-shelf-based SQQ-89 system, which includes a multifunction towed array, beginning in fiscal year 2005 and ending in fiscal year 2015.

Because these upgrades are not considered suitable for the DDG-51 ships and will be replaced with a fully integrated system, they can be canceled and the fiscal year 1999 budget request can be reduced by \$7.8 million.

Cooperative Engagement Capability (Line 66)

The Navy's fiscal year 1999 budget request of \$47.3 million for the Cooperative Engagement Capability program can be denied because procurement of additional systems is premature and \$26 million is available in fiscal year 1998 funds that can be used to continue procurement of the system in fiscal year 1999 to avoid a production break.

On March 2, 1998, the Assistant Secretary of the Navy for Research, Development, and Acquisition approved limited production of four units and long lead item procurement for five additional units in fiscal year 1998. This reduction from the planned limited production of seven systems in fiscal year 1998 and the procurement of four systems in fiscal year 1999 is reported to have occurred due to concerns over the poor interoperability results during operational testing and about the maturity of the software design and performance.

Development of the software has experienced interoperability and technical problems as well as schedule delays. The Navy Operational Test and Evaluation Force report on the system's initial operational testing stated that the performance of the configured baseline 1 system during this phase of testing does not support

employment in an operational environment. Interoperability problems between the system and related programs are also causing the Navy to revise its development and production plans for these programs. An advisory group's recommendations on an assessment of the system with special emphasis on its interoperability are still being evaluated. On March 24, 1998, the Director, Surface Warfare, Office of the Chief of Naval Operations, stated recent interoperability problems are of growing concern. On May 2, 1998, the Chief of Naval Operations said repeated interoperability problems indicate a requirement to more thoroughly test new capabilities prior to system delivery and directed the development of a process to ensure appropriate resources are aligned to resolve battle group interoperability problems before deployment.

Program officials said full operational testing on the baseline 2 system has been delayed until fiscal year 2000. Further production schedule delays may result from contract funding issues related to the software RDT&E effort. In addition, the program office does not plan to fully operationally test airborne units and surface units together prior to the full production decision. Thus, the Navy plans to enter production in fiscal year 1999 with less than a fully representative system.

DOD did not agree with the reduction, stating that reducing the funds will jeopardize the buy of the additional systems and the ability to address the interoperability issues. It noted that the hardware is proving itself, although there are still software issues with interoperability problems. The Navy can minimize further production of the system until the interoperability problems are resolved and a fully representative system completes operational testing. Of the \$75 million appropriation added to the program in fiscal year 1998, \$26 million is available after award of the limited production contract. These funds can be used to continue the production line and provide additional systems for testing while limiting the number of systems produced until the software completes operational testing and operational effectiveness can be proven. Therefore, we continue to believe that the \$26 million in fiscal year 1998 funds can be used for production in fiscal year 1999, thereby avoiding a production break, and the fiscal year 1999 budget request can be denied.

Anti-Ship Missile Decoy System (Line 157)

The Navy's fiscal year 1999 budget request of \$21.5 million for the Anti-Ship Missile Decoy System can be reduced by \$15 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements. According to Navy program officials, the development program experienced delays in development testing and the milestone III decision was rescheduled for fiscal year 1999. The \$15 million in fiscal year 1998 funds included in DOD's congressional request for reprogramming to Military Personnel, Navy, was not approved. Since the

\$15 million will not be used for the fiscal year 1998 decoy program, this amount can be used to offset the fiscal year 1999 budget request.

AIR FORCE PROCUREMENT PROGRAMS

The Air Force requested \$17.5 billion for procurement programs in fiscal year 1999. As shown in table I.10, we identified potential reductions of about \$987.8 million to the fiscal year 1999 request and potential rescissions of \$8.9 million, \$41,000, and \$8.3 million from fiscal year 1998, 1997, and 1996 appropriations, respectively.

Table I.10: Potential Reductions and Rescissions to Air Force Procurement Programs

Dollars in millions

Procurement appropriation	Fiscal year 1999		Potential rescission		
	Request	Potential reduction	Fiscal year 1998	Fiscal year 1997	Fiscal year 1996
Procurement (inflation adjustment)	\$17,474.800	\$230.000	0	0	0
Aircraft	7,756.500 ^a	629.772	\$8.934	\$0.041	0
Missile	2,359.800 ^a	127.997	0	0	\$8.300
Total		\$987.769	\$8.934	\$0.041	\$8.300

^aThis amount is part of the Air Force's procurement request of \$17,474.8 million.

Procurement, Air Force

Inflation Adjustment

If the Congress does not approve DOD's reprogramming request of the fiscal year 1998 funds, the Air Force's fiscal year 1999 procurement budget request of \$17.5 billion can be reduced by \$230 million because fiscal year 1999 program requirements are overstated by \$129 million and \$101 million in fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

The administration's current inflation forecast indicates projected levels of inflation for fiscal years 1999 and 1998 are lower than previously forecasted. According to

DOD, the inflation reductions in the Air Force's procurement accounts are about \$129 million and \$101 million in fiscal years 1999 and 1998, respectively. The fiscal year 1998 DOD omnibus reprogramming request includes the fiscal year 1998 inflation adjustment. DOD did not agree with the reduction, stating that it plans to use these funds for other program priorities that were previously unfunded. Since program requirements have been reduced based on a lower than projected inflation rate, \$129 million can be reduced from the fiscal year 1999 budget request and \$101 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

Aircraft Procurement, Air Force

The Air Force requested \$7.8 billion for aircraft procurement in fiscal year 1999. As shown in table I.12, we identified potential reductions of about \$629.8 million and potential rescissions of \$8.9 million and \$41,000 from the fiscal year 1998 and 1997 appropriations, respectively.

Table I.11: Potential Reductions and Rescissions to Air Force Aircraft Procurement Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999		Potential rescission	
		Request	Potential reduction	Fiscal year 1998	Fiscal year 1997
3	Advanced Tactical Fighter (F-22)	\$595.100	\$595.100	0	0
5	F-15A (E model)	0	0	0	\$0.041
6	F-15A (E model) Advance Procurement	0	0	\$8.934	0
26	B-1B (modification)	91.600	9.027	0	0
64	Spares and Repair Parts	524.800	25.645	0	0
	Total		\$629.772	\$8.934	\$0.041

Advanced Tactical Fighter (F-22) (Line 3)

The Air Force's fiscal year 1999 budget request of \$595.1 million for the F-22 procurement program could be deferred until the Air Force completes sufficient flight testing of the aircraft. The Air Force could delay the fiscal year 1999 buy of the first two production aircraft³ until fiscal year 2000 because F-22 flight tests have been delayed and tests planned before contract award may be insufficient to determine whether major problems exist with F-22s. Further, the percentage of manufacturing processes that have been stabilized is lower than several military and commercial programs we reviewed, and the Air Force is concerned that avionics software development and testing are not progressing sufficiently to meet software delivery schedules.

We reported separately to the Congress on these issues in early 1998, highlighting the delays in the progress of the F-22 engineering and manufacturing development program⁴ and defining best commercial practices for acquisition of products.⁵ Our testimony in March 1998 further discussed these issues and questioned the appropriateness of acquiring two F-22 aircraft in fiscal year 1999.⁶

Technical problems in the F-22 program will reduce the amount of flight test data available at contract award. In May 1997, the Air Force planned first flights of the first and second engineering and manufacturing development aircraft for May 1997 and July 1998. These aircraft were to accumulate 601 flight test hours by the end of June 1999, which was the scheduled contract award date for the first two production aircraft. However, technical problems delayed the May flight over 3 months to September 1997. The flight test program was suspended to modify the test aircraft and to perform planned ground testing and did not resume until May 1998, over 4 months later than the Air Force planned. The Air Force met the scheduled date for first flight of the second aircraft.

³On May 13, 1998, the Under Secretary of Defense for Acquisition and Technology designated these two aircraft "production representative test vehicles." Regardless of their designation, the same financial commitment is being made with the same limited amount of flight test data.

⁴F-22 Aircraft: Progress in Achieving Engineering and Manufacturing Development Goals (GAO/NSIAD-98-67, Mar. 10, 1998).

⁵Best Practices: Successful Application to Weapon Acquisitions Requires Changes to DOD's Environment (GAO/NSIAD-98-56, Feb. 24, 1998).

⁶F-22 Aircraft: Progress of the Engineering and Manufacturing Development Program (GAO/T-NSIAD-98-137, Mar. 25, 1998).

The delays in testing, coupled with an acceleration of the planned production contract award, reduced the amount of flight testing that can be accomplished before contract award. The Air Force and the prime contractor signed a memorandum of understanding in January 1998 to accelerate contract award for the first two production aircraft, from June 1999 to December 1998. Because of delays in the flight test program, manufacturing problems, and accelerated contract award date, the development aircraft are expected to accumulate only 183 flight test hours by December 1998—compared to 601 hours the Air Force planned in May 1997. The 601 hours is not expected to be accumulated until October 1999. The changes to planned flight test hours are shown in table I.12.

Table I.12: Comparison of F-22 Flight Test Hours Planned

Flight hour schedule as of	Total flight test hours planned	Flight test hours planned before award	Percent of flight test hours planned before award
November 1994	5,191	1,400	27
May 1997	4,337	601	14
February 1998	4,337	183	4

The reductions to the flight test hours that are planned to be accomplished prior to the production contract award is a concern because we believe it is important to identify and resolve major problems before production begins and DOD has previously advised us that major problems, if they exist, usually occur within the first 10 to 20 percent of the flight test program. However, DOD and the Air Force did not agree that procurement of two aircraft in fiscal year 1999 should be delayed. The Air Force stated that by December 1998, the F-22 flight test program will have completed 10 test objectives designed to verify basic air worthiness and flying qualities of the aircraft. These 10 objectives were outlined in a May 1998 memorandum from the Under Secretary of Defense for Acquisition and Technology who indicated that the F-22 should progress toward meeting these objectives before award of the contract in December 1998. The Air Force also stated that accomplishing these 10 test objectives is more meaningful than completing certain numbers of flight test hours and will be adequate evidence that the F-22 should proceed into the production phase.

In response to our 1995 report⁷ on the F-22 program, DOD cited a Defense Science Board study that noted that the RAND Corporation stated that when major program problems occur, it is usually within the first 10 to 20 percent of flight testing. The Board stated that completing 1,000 flight test hours prior to F-22 production contract award would be equivalent to performing 10 to 20 percent of the flight test program. Although the 601 hours is 14 percent of the May 1997 planned flight test program, 183 hours is only 4 percent of the current program. As a result, the Air Force plans to enter production with significantly fewer hours than what would be needed to identify major problems. Therefore, delaying contract award until October 1999 would allow time for the Air Force to accumulate more performance data to identify problems before awarding the production contract.

In addition, many key manufacturing processes have not been stabilized. As of December 1997, the F-22 program had only about 40 percent of its key manufacturing processes stabilized, and it is not scheduled to have all of its manufacturing processes under control until the fourth year of production. In contrast, we have found that the Joint Direct Attack Munition and AIM-9X programs stabilized most of their key manufacturing processes before production, and commercial programs often had all of their processes stabilized before committing to production to avoid problems after production started. Delaying production start until October 1999 would allow the program time to achieve a higher process stabilization rate. The program would, therefore, have a better chance of meeting cost, schedule, and quality targets in production.

An October 1999 production start would also provide the Air Force more time to develop and test F-22 avionics systems software, rated as the program's highest technical risk in 1993 by DOD's Defense Science Board. The Air Force is concerned that software writing and testing are not progressing sufficiently to ensure that software will be delivered on schedule. The Air Force is assessing the status of avionics software development progress and plans to determine the revised schedule and estimated impact on program cost by October 1998.

The Air Force maintains that its current acquisition strategy is the most cost-effective. It stated that delaying award for the first two production aircraft from fiscal year 1999 to fiscal year 2000 will cause the entire production program to slip and significantly increase its cost. The amount of cost impact is not firmly established. Air Force officials indicated that development and production cost limitations would need to be increased by \$0.5 billion and \$2.25 billion, respectively. However, the Air Force's

⁷Tactical Aircraft: Concurrency in Development and Production of F-22 Aircraft Should Be Reduced (GAO/NSIAD-95-59, Apr. 19, 1995).

current estimate of cost impact is about 32 percent less than its initial estimate. We have not reviewed the basis for the Air Force's estimate of the cost impact, but there are also costs and other impacts associated with buying production aircraft before they are adequately tested. Buying production articles before they can be adequately tested can result in buying systems that require significant, and sometimes costly, modifications to achieve satisfactory performance, accepting less capable systems than planned, and deploying substandard systems to combat forces.⁸

By delaying contract award to allow time to accomplish the testing previously planned, more time would also be available to resolve manufacturing problems, add stability to manufacturing processes, and more fully develop and test avionics software, prior to making a commitment to production. Therefore, we continue to believe that contract award can be delayed until fiscal year 2000.

F-15A (E model) (Line 5)

The Air Force's fiscal year 1997 appropriation for the F-15 can be rescinded by \$0.041 million because the funds are no longer required for the program. According to program officials, approximately \$0.041 million of fiscal year 1997 funding is being withheld by the Air Force and is expected to be reprogrammed to higher priority Air Force needs. Since the \$0.041 million will not be used for the F-15, these fiscal year 1997 funds can be rescinded if they are not reprogrammed. DOD stated it concurred with the rescission.

F-15A (E model) Advance Procurement (Line 6)

If the Congress does not approve DOD's reprogramming request, the Air Force's fiscal year 1998 appropriation for F-15A advance procurement can be rescinded by \$8.934 million because the Air Force is not requesting funding for the F-15 aircraft in fiscal year 1999. These funds are included in the fiscal year 1998 DOD omnibus reprogramming request. Since the \$8.934 million will not be used for F-15 advance procurement, these fiscal year 1998 funds can be rescinded if they are not reprogrammed. DOD stated it concurred with the rescission if the funds are not approved for reprogramming.

⁸Weapons Acquisition: Low-Rate Initial Production Used to Buy Weapon Systems Prematurely (GAO/NSIAD-95-18, Nov. 21, 1994).

B-1B (Modification) (Line 26)

If the Congress does not approve DOD's reprogramming request, the Air Force's fiscal year 1999 budget request of \$91.6 million for the B-1B modification can be reduced by \$9.027 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements. In fiscal years 1996 and 1997, RDT&E funds were added to the program with instructions to accelerate the bomber's capability to deliver the Joint Direct Attack Munition and other precision guided munitions.

In fiscal year 1998, the Air Force requested \$15.591 million, in this budget line, to begin low rate procurement of the Joint Direct Attack Munition integration kits and to procure block D simulator hardware to train aircrews to use the munition. However, \$9.027 million of that amount is included in the fiscal year 1998 DOD omnibus reprogramming request. The loss of the funds, according to program officials, would slow down incorporation of the munitions into the B-1B bomber and delivery of the precision guided munition capability to combat units. Since the Air Force does not plan to use the \$9.027 million in fiscal year 1998 funds to produce munition integration kits and related simulators, the funds can be used to offset the fiscal year 1999 budget request. DOD stated it concurred with the reduction if the Congress does not approve the omnibus reprogramming request and the funds are returned to the B-1 program in fiscal year 2000.

Spares and Repair Parts (Line 64)

The Air Force's fiscal year 1999 budget request of \$524.8 million for spares and repair parts can be reduced by \$25.645 million because procurement of F-22 spare engines can be deferred if the Air Force's planned fiscal year 1999 buy of two F-22 aircraft is deferred until fiscal year 2000. (See p. 28 for the related information on the F-22 aircraft program flight testing delays and stabilization of manufacturing processes.) Officials in the F-22 program office said they disagreed with deferring the planned buys of two F-22 aircraft and spare engines. DOD also disagreed with deferring the buy of two F-22 aircraft and, therefore, did not agree with this related reduction. We, however, continue to maintain that if the fiscal year 1999 budget request for the two F-22 aircraft is denied, the \$25.645 million requested for related spare engines in fiscal year 1999 can be reduced.

Missile Procurement, Air Force

The Air Force requested \$2.4 billion for missile procurement programs in fiscal year 1999. As shown in table I.13, we identified potential reductions of about \$128 million and a potential rescission of \$8.3 million from the expiring fiscal year 1996 appropriation.

Table I.13: Potential Reductions and Rescission to Air Force Missile Procurement Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999		Potential rescission
		Request	Potential reduction	Fiscal year 1996
5	Advanced Medium Range Air-to-Air Missile (AMRAAM)	\$114.600	\$27.297	0
21	Global Positioning System (multiyear procurement) Space Advance Procurement (calendar year)	77.400	77.400	0
24	Titan Space Boosters Space	578.500	10.900	0
25	Medium Launch Vehicles Space	188.400	12.400	0
28	Defense Support Program Space	89.900	0	\$8.300
	Total		\$127.997	\$8.300

Advanced Medium Range Air-to-Air Missile (AMRAAM) (Line 5)

If the Congress does not approve DOD's reprogramming request, the Air Force's fiscal year 1999 budget request of \$114.6 million for the Advanced Medium Range Air-to-Air Missile can be reduced by \$27.297 million. The fiscal year 1999 budget request is

overstated by \$20.9 million and \$6.397 million of fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

On October 15, 1997, the Air Force signed a price agreement for the next 3 years of production, capitalizing on the anticipated merger of Raytheon Company and Hughes Aircraft Company. On the basis of this agreement, the Air Force awarded a contract to Raytheon Missile Systems Company on April 13, 1998. According to the Air Force, price reductions brought about by acquisition reform, the price agreement, and contract negotiations resulted in a fiscal year 1999 savings of \$20.9 million. In addition, we identified \$6.397 million of fiscal year 1998 funds as available to offset fiscal year 1999 requirements. According to an Air Force official, contract negotiations resulted in hardware cost savings of \$3.897 million, and they also identified an additional \$2.5 million as being available for the pending fiscal year 1998 DOD omnibus reprogramming request. The omnibus reprogramming request includes \$6.375 million of fiscal year 1998 funds.

DOD and the Air Force did not agree that the budget request can be reduced. The Air Force wants to invest in developing improvements to the missile processor more quickly and new program requirements and to remedy a potential shortfall in missile spares. Thus, it said that the reduction would have a negative impact on processor modernization and further re-investment of the funds into the program. However, the \$27.297 million is available as the result of savings in negotiations and prior to the fiscal year 1999 request, the Air Force's alternative uses were either not requested or funded at a lower level than now planned. Therefore, we continue to believe that the fiscal year 1999 budget request can be reduced by \$20.9 million and \$6.397 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

**Global Positioning System (Multivear Procurement) Space
Advance Procurement (Calendar Year) (Line 21)**

The Air Force's fiscal year 1999 budget request of \$77.4 million for advance procurement for the Global Positioning System can be denied because funding requested for the purchase of long lead items for 15 satellites is not needed. The \$77.4 million requested for the long lead items for 15 block IIF satellites is not required because the Air Force has decided to cancel the acquisition of the first three satellites scheduled for fiscal year 2000.

According to program officials, the Air Force decided to cancel the purchase of three satellites based on other Air Force funding priorities having precedence over these satellites. DOD stated a final determination of the need for the three satellites is pending; a decision is expected by December 1998. If the satellites are not needed,

the Air Force can use the funds toward Global Position System modernization or other Air Force needs. Canceling the acquisition will end the multiyear procurement and eliminate the need for advance procurement funding until fiscal year 2000. Therefore, we continue to believe that the \$77.4 million requested for advance procurement in the fiscal year 1999 budget request can be denied.

Titan Space Boosters Space (Line 24)

The Air Force's fiscal year 1999 budget request of \$578.5 million for Titan Space Boosters Space can be reduced by \$10.9 million due to favorable contract negotiations. In March 1998, the Air Force renegotiated contract costs for the total Titan IV program, which, after reprogramming actions, resulted in \$10.9 million in fiscal year 1998 funds being excess to Titan program requirements. Since the \$10.9 million in fiscal year 1998 funds are excess to requirements, these funds can be used to offset the fiscal year 1999 budget request.

Medium Launch Vehicles Space (Line 25)

The Air Force's fiscal year 1999 budget request of \$188.4 million for Medium Launch Vehicles can be reduced by \$12.4 million because program requirements are overstated. According to program officials, due to the extended Global Positioning System satellite life expectancy, only two of the four block 2R satellites will be launched in fiscal year 1999, and this line included \$6.2 million to support each of the planned launches. The Air Force stated that it planned to use \$1.4 million on other Air Force needs. Since two fewer launches will occur than planned, \$12.4 million can be reduced from the fiscal year 1999 budget request.

Defense Support Program Space (Line 28)

Air Force officials identified \$8.3 million of the fiscal year 1996 appropriation as excess to program requirements due to favorable sensor contract negotiations and reductions in satellite storage costs. Since these funds will expire if not obligated by September 30, 1998, they are available for reprogramming or rescission during the remainder of fiscal year 1998.

DEFENSE-WIDE PROCUREMENT PROGRAMS

DOD requested \$2 billion for defense-wide procurement programs in fiscal year 1999. As shown in table I.14, we identified a potential reduction of \$94 million to the fiscal year 1999 request.

Table I.14 Potential Reduction to Defense-wide Procurement Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999	
		Request	Potential reduction
	Procurement (inflation adjustment)	\$2,042.200	\$94.000
	Total		\$94.000

*This amount is part of the defense-wide procurement request of \$2,042.2 million.

Procurement, Defense-wide

Inflation Adjustment

If the Congress does not approve DOD's reprogramming request of \$22 million from the fiscal year 1998 funds, the defense-wide fiscal year 1999 procurement budget request of \$2 billion can be reduced by \$94 million because fiscal year 1999 program requirements are overstated by \$71 million and \$23 million in fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

The administration's current inflation forecast indicates projected levels of inflation for fiscal years 1999 and 1998 are lower than previously forecasted. According to DOD, the inflation reductions in the defense-wide's procurement accounts are about \$71 million and \$23 million in fiscal years 1999 and 1998, respectively. The fiscal year 1998 DOD omnibus reprogramming request includes \$22 million of the inflation adjustment. DOD did not agree with the reduction stating, that it plans to use these funds for other program priorities that were previously unfunded. Since program requirements have been reduced based on a lower than projected inflation rate, \$71 million can be reduced from the fiscal year 1999 budget request and \$23 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

**POTENTIAL REDUCTIONS AND RESCISSIONS TO RESEARCH,
DEVELOPMENT, TEST, AND EVALUATION PROGRAMS**

DOD requested \$35.8 billion for RDT&E programs in fiscal year 1999. As shown in table II.1, our review of selected budget line items in the request and prior years' appropriations identified potential reductions of \$1.1 billion to fiscal year 1999 requests and potential rescissions of \$15 million from fiscal year 1998 appropriations and \$66.7 million from the expiring fiscal year 1997 appropriations.

Table II.1: Potential Reductions and Rescissions to RDT&E Programs

Dollars in millions

Procurement appropriation	Fiscal year 1999		Potential rescission	
	Request	Potential reduction	Fiscal year 1998	Fiscal year 1997
Army	\$4,780.545	\$144.738	\$15.000	0
Navy	8,108.923	251.061	0	0
Air Force	13,598.093	370.901	0	0
Defense-wide	9,314.665	350.000	0	\$66.737
Total		\$1,116.700	\$15.000	\$66.737

ARMY RDT&E PROGRAMS

The Army requested \$4.8 billion for RDT&E programs in fiscal year 1999. As shown in table II.2, we identified a potential reduction of \$144.7 million to the fiscal year 1999 request and a potential rescission of \$15 million from the fiscal year 1998 appropriation.

Table II.2: Potential Reductions and Rescission to Army RDT&E Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999		Potential rescission
		Request	Potential reduction	Fiscal year 1998
	RDT&E (inflation adjustment)	\$4,780.545	\$102.000	0
53	Joint Tactical Radio	15.600 ^a	0	\$15.000
63	Army Data Distribution System	17.281 ^a	10.981	0
155	Combat Vehicle Improvement Programs	94.756 ^a	4.000	0
161	Force Twenty-One (XXI), Warfighting Rapid Acquisition Program (WRAP)	99.528 ^a	27.757	0
	Total		\$144.738	\$15.000

^aThis amount is part of the Army's RDT&E request of \$4,780.5 million.

Inflation Adjustment

If the Congress does not approve DOD's reprogramming request of \$35 million from the fiscal year 1998 funds, the Army's fiscal year 1999 RDT&E budget request of \$4.8 billion can be reduced by \$102 million because fiscal year 1999 program requirements are overstated by \$67 million and \$35 million in fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

The administration's current inflation forecast indicates that projected levels of inflation for fiscal years 1998 and 1999 are lower than previously forecasted. According to DOD, the inflation reductions in the Army's RDT&E accounts are about \$67 million and \$35 million in fiscal year 1999 and 1998, respectively. The fiscal year 1998 DOD omnibus reprogramming request includes the \$35 million inflation adjustment. DOD did not agree with the reduction, stating that it plans to use these funds for other program priorities that were previously unfunded. Since program

requirements have been reduced based on a lower than projected inflation rate, \$67 million can be reduced from the fiscal year 1999 budget request and \$35 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

Joint Tactical Radio (Line 53)

The \$15 million reprogrammed to the Joint Tactical Radio program by the services can be rescinded because the new program can be initiated, if approved by Congress, with the fiscal year 1999 funds requested. These fiscal year 1998 funds were reprogrammed from the Army, Navy and the Air Force to initiate the program. According to an Army official, a joint program office will be established in the Washington, D.C., area upon program approval of the new start and the Army will be designated the executive service and an Air Force program official will be assigned. Army officials said that based on the nature of the program and the requirements, they believe the fiscal year 1998 funds and fiscal year 1999 requested funds can be obligated for meaningful work prior to the end of fiscal year 1999. However, given the delay in getting this effort underway, we question if the services can implement such an ambitious plan that would ensure the efficient use of the combined funds in fiscal year 1999. DOD did not agree with the rescission and reiterated the Army's position. We believe that this aggressive approach will not allow adequate time for sufficient analysis before starting the prototype effort. Since fiscal year 1999 funds will be available to initiate the program if it is approved, we continue to believe the \$15 million in fiscal year 1998 funds can be rescinded.

Army Data Distribution System (Line 63)

The Army's fiscal year 1999 budget request of \$17.3 million for the Data Distribution System can be reduced by \$10.981 million because fiscal year 1999 program requirements are overstated. These funds were requested for the continued development of the Near Term Digital Radio, included in this line; however, DOD's goal is to minimize the number of service unique tactical radios.

Program officials noted that the Near Term Digital Radio plays a critical role in the Army's efforts to digitize the battlefield and is needed to support the first digitized division as a gap filler until the Joint Tactical Radio System is available. They also stated that it is the only networked wideband data waveform being developed and that it will provide insights into new technology that will ultimately benefit the joint program. DOD did not agree with the reduction, stating that the recently appointed Assistant Secretary for Command, Control, and Communications supports the program.

The mission needs statement for the Joint Tactical Radio System was approved August 1997 by the Joint Requirements Oversight Council. In September 1997, DOD initiated the program to develop a single family of radios to replace many incompatible service radios. The intent of the joint radio program is to minimize the proliferation of unique and multiple radio programs. Therefore, it appears that the Army's plan to develop a service unique interim radio for the digital battlefield is in conflict with DOD's strategy. In addition, the results of the planned Tactical Radio program review to assess the Army's acquisition strategy for the Near Term Digital Radio and other programs needed to support the first digitized division are not available. Terminating this developmental effort would further DOD's goal of minimizing the proliferation of service unique radio programs and eliminate the need for the \$10.981 million in the fiscal year 1999 request.

Combat Vehicle Improvement Programs (Line 155)

If the Congress does not approve DOD's reprogramming request, the Army's fiscal year 1999 budget request of \$94.8 million for Combat Vehicle Improvement Programs can be reduced by \$4 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements.

These funds, added to the program last year, were included in the fiscal year 1998 DOD omnibus reprogramming request. Program officials stated these funds are needed for air defense alerting device integration efforts on the Bradley Linebacker, included in this budget line. However, the integration efforts were not of sufficient priority to be included in the President's fiscal year 1998 budget request. Program officials agreed with the facts but reiterated that the funds are needed. Since DOD does not plan to use the \$4 million for this integration efforts, these fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

Force Twenty-One (XXI), Warfighting Rapid Acquisition Program (WRAP) (Line 161)

If the Congress does not approve DOD's reprogramming request of the fiscal year 1998 funds, the Army's fiscal year 1999 budget request of \$99.5 million for the Force Twenty-One Warfighting Rapid Acquisition Program can be reduced by \$27.757 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements.

In fiscal years 1997 and 1998, the Army was unable to make funds available to new war-fighting initiatives early enough in the fiscal year to permit timely obligation. For example, DOD did not release the fiscal year 1997 funds until September 1997. Most

of the funds appropriated for fiscal year 1998 were reprogrammed to the 11 fiscal year 1997-98 initiatives, leaving \$36.4 million for new fiscal year 1998-99 initiatives. On July 16, 1998, the Army submitted a list of fiscal years 1998-1999 program candidates for \$8.643 million in new initiatives for congressional approval. The remaining \$27.757 million was included in the fiscal year 1998 DOD omnibus reprogramming request. Since the Army does not plan to use the \$27.757 million in fiscal year 1998 funds on new initiatives, these funds can be used to offset the fiscal year 1999 budget request if they are not reprogrammed.

NAVY RDT&E PROGRAMS

The Navy requested \$8.1 billion for RDT&E programs in fiscal year 1999. As shown in table II.3, we identified a potential reduction of about \$251.1 million to the fiscal year 1999 request.

Table II.3: Potential Reductions to Navy RDT&E Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999	
		Request	Potential reduction
	RDT&E (inflation adjustment)	\$8,108.923	\$223.000
83	Other Helo Development	231.120 ^a	15.400
104	Enhanced Modular Signal Processor	1.599 ^a	1.092
108	Submarine Combat System	11.710 ^a	4.941
117	Lightweight Torpedo Development	8.106 ^a	1.545
128	Navigation/Identification System	42.301 ^a	1.958
165	MK-48 ADCAP	17.550 ^a	3.125
	Total		\$251.061

^aThis amount is part of the Navy's RDT&E request of \$8,108.9 million.

Inflation Adjustment

The Navy's fiscal year 1999 RDT&E budget request of \$8.1 billion can be reduced by \$223 million because fiscal year 1999 program requirements are overstated by \$141 million and \$82 million in fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

The administration's current inflation forecast indicates projected levels of inflation for fiscal year 1999 and 1998 are lower than previously forecasted. According to DOD, the inflation reductions in the Navy's RDT&E account are about \$141 million and \$82 million in fiscal year 1999 and 1998, respectively. DOD did not agree with the reduction, stating that it plans to use these funds for other program priorities that were previously unfunded. Since program requirements have been reduced based on a lower than projected inflation rate, \$141 million can be reduced from the fiscal year 1999 budget request and \$82 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

Other Helo Development (Line 83)

The Navy's fiscal year 1999 budget request of \$231.1 million for Other Helo Development can be reduced by \$15.4 million because program requirements are overstated. The Navy requested these funds to correct deficiencies identified during evaluation of the Airborne Low Frequency Sonar. However, the operational evaluation for the sonar is not scheduled to begin until the second quarter of fiscal year 2001 and finish a year later. Therefore, funds to support an operational evaluation and correct deficiencies will not be required until fiscal year 2001. Since these funds will not be needed for the operational evaluation and engineering and testing, the fiscal year 1999 budget requested can be reduced by \$15.4 million.

DOD and the Navy did not agree with the reduction. According to the Navy, the fiscal year 1999 funds will be used to complete the reliability correction phase and operational testing. However, our position is based on budget documentation that confirms that the operational evaluation of the sonar will not begin until fiscal year 2001. Therefore, we continue to believe that since these funds will not be needed for the operational evaluation and engineering and testing, the fiscal year 1999 budget request can be reduced by \$15.4 million.

Enhanced Modular Signal Processor (Line 104)

The Navy's fiscal year 1999 budget request of \$1.6 million for the Enhanced Modular Signal Processor can be reduced by \$1.092 million because an equivalent amount of

fiscal year 1998 funds is available to meet fiscal year 1999 program requirements. These fiscal year 1998 funds were appropriated to develop software to transfer special acoustic data processing applications from military specifications to the commercial-off-the-shelf signal processors in support of the SH-60R Airborne Low Frequency Sonar and AN/SQQ-89 (V)15 platforms. According to the Navy, these funds have been identified as available for the fiscal year 1998 DOD omnibus reprogramming request and are expected to be used to finance the Joint Tactical Radio development and the major range and test facilities base. However, these funds were not included in the fiscal year 1998 DOD omnibus reprogramming request. Since the \$1.092 million will not be used to develop the software in fiscal year 1998, it can be used to offset the fiscal year 1999 budget request.

Submarine Combat System (Line 108)

The Navy's fiscal year 1999 budget request of \$11.7 million for the Submarine Combat System can be reduced by \$4.941 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements. These funds were provided for the design and integration of a commercial-off-the-shelf technology replacement for the Enhanced Modular Signal Processor. However, this effort has been delayed until fiscal year 2003. As a result, according to Navy Comptroller officials, \$3.077 million of the \$4.941 million has been reprogrammed to meet other, higher priority Navy requirements. (Documentation to support this reported reprogramming action was not provided.) Therefore, since \$4.941 million is excess to fiscal year 1998 requirements and will not be used for the purpose for which they were appropriated, these funds can be used to offset the fiscal year 1999 budget request.

Lightweight Torpedo Development (Line 117)

The Navy's fiscal year 1999 budget request of \$8.1 million for Lightweight Torpedo Development can be reduced by \$1.545 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements. These funds are available because of favorable engineering and manufacturing contract negotiations. Therefore, the \$1.545 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

Navigation/Identification System (Line 128)

The Navy's fiscal year 1999 budget request of \$42.3 million for the Navigation/Identification System can be reduced by \$1.958 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements.

According to Navy Comptroller officials, the \$1.958 million in fiscal year 1998 funds has been identified for reprogramming to finance the Joint Tactical Radio development and Major Range and Test Facilities Base programs. Since the \$1.958 million in fiscal year 1998 funds will not be used for the Navigation/Identification System, these funds can be used to offset the fiscal year 1999 budget request if they are not reprogrammed.

MK-48 ADCAP (Line 165)

The Navy's fiscal year 1999 budget request of \$17.6 million for MK-48 ADCAP can be reduced by \$3.125 million because program requirements are overstated due to delays in operational testing for the block IV software upgrade. The Navy has shifted its focus from primarily developing shallow water software upgrades to torpedo sonar for identifying countermeasures and discriminating them from the target. As a result, an operational evaluation of block IV software upgrade scheduled in fiscal year 1999 has been delayed until the 4th quarter of fiscal year 2000.

The Navy requested \$3.125 million in fiscal year 1999 to complete developmental testing and prepare for operational testing of the block IV software upgrade in fiscal year 2000. However, its fiscal year 1998 appropriation included \$1.2 million to complete software upgrade developmental testing; therefore, these funds can be used to complete this testing in fiscal year 1999. Since scheduled testing has slipped, the funds requested for operational testing of block IV software, if needed, can be requested in the fiscal year 2000 budget, and the fiscal year 1999 budget request can be reduced by \$3.125 million.

AIR FORCE RDT&E PROGRAMS

The Air Force requested \$13.6 billion for RDT&E programs in fiscal year 1999. As shown in table II.4, we identified a potential reduction of \$370.9 million to the fiscal year 1999 request.

Table II.4: Potential Reductions to Air Force RDT&E Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999	
		Request	Potential reduction
	RDT&E (inflation adjustment)	\$13,598.093	\$325.000
64	F-22 Engineering and Manufacturing Development (EMD)	1,582.217 ^a	6.837
67	Electronic Warfare (EW) Development	90.126 ^a	9.900
93	Evolved Expendable Launch Vehicle Program (Space)	280.297 ^a	28.200
127	F-15E Squadrons	104.207 ^a	0.964
	Total		\$370.901

^aThis amount is part of the Air Force's RDT&E request of \$13,598.1 million.

Inflation Adjustment

If the Congress does not approve DOD's reprogramming request of \$56.466 million from the fiscal year 1998 funds, the Air Force's fiscal year 1999 RDT&E budget request of \$13.6 billion can be reduced by \$325 million because fiscal year 1999 program requirements are overstated by \$265 million and \$60 million in fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

The administration's current inflation forecast indicates projected levels of inflation for fiscal years 1999 and 1998 are lower than previously forecasted. According to DOD, the inflation reductions in the Air Force's RDT&E accounts are about \$265 million and \$60 million in fiscal years 1999 and 1998, respectively. The fiscal year 1998 DOD omnibus reprogramming request includes the fiscal year 1998 inflation adjustment. DOD did not agree with the reduction, stating that it plans to use these funds for other program priorities that were previously unfunded. Since program requirements have been reduced based on a lower than projected inflation rate, we continue to believe \$265 million can be reduced from the fiscal year 1999 budget request and \$60 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

**F-22 Engineering and Manufacturing
Development (EMD) (Line 64)**

The Air Force's fiscal year 1999 budget request of \$1.6 billion for the F-22 engineering and manufacturing development program can be reduced by \$6.837 million because an equivalent amount of fiscal year 1998 funds is available to meet fiscal year 1999 program requirements.

The fiscal year 1998 budget included \$49.603 million for the 6-month award fee period ended March 31, 1998. During this 6-month period, the Air Force awarded \$42.766 million, or \$6.837 million less than the funds budgeted, for award fees to the F-22 prime contractors, Lockheed Martin Aeronautical Systems for the aircraft and United Technologies Corporation (Pratt & Whitney) for the engine.

The purpose of the award fee is to motivate excellent contractor performance. The contracts with the F-22 prime contractors provide for the Air Force to assess the contractors' performance every 6 months to determine the amounts of award fee to be granted. In the 13 award fee periods completed through September 1997, the Air Force awarded an average of 85 and 87 percent of the potential fees to Lockheed Martin and Pratt & Whitney, respectively, or about \$123 million less than the amounts available for award fees since 1991.

DOD and the Air Force did not agree with the reduction. The Air Force stated that the reduction would eliminate the program manager's ability to reallocate funds to maintain schedule and to remain under the cost limitation imposed by the Congress. The Air Force stated that it would also require some corresponding reduction in aircraft capability.

The potential reduction would not cause the F-22 program to be funded at less than the cost limitation. The Air Force can request funds for unforeseen efforts, potential cost growth, or investments for potential savings in future year budgets as they become more definitive. Therefore, since the \$6.837 million in fiscal year 1998 funds is not needed for the award fee, these funds can be used to offset the fiscal year 1999 budget request.

Electronic Warfare (EW) Development (Line 67)

The Air Force's fiscal year 1999 budget request of \$90.1 million for electronic warfare development can be reduced by \$9.9 million because program requirements are overstated. The funds were requested for the integration of the Integrated Defensive Electronic Countermeasures, Radio Frequency Countermeasure, Fiber Optic Towed

Decoy subsystem on the F-15 aircraft. This subsystem is being developed by the Navy for joint service use. The Air Force plans to integrate the full subsystem on the B-1B aircraft and the Integrated Defensive Electronic Countermeasures, Fiber Optic Towed Decoy subsystem on the F-15 aircraft.

Program officials told us that a recent review of the program, ordered by the Navy Service Acquisition Executive, disclosed a schedule slip and an increase in program costs. Because of the cost increase, the Air Force wants to delay and rephase its F-15 integration efforts. It said the desired rephase of the F-15 integration efforts will result in a \$9.9-million excess for its fiscal year program needs. Program officials said the overall development cost has not decreased and that these funds would be required in future years, primarily in fiscal year 2000 to maintain program executability. In addition, they indicated that some of these funds could be realigned to other electronic warfare development programs that are experiencing problems. DOD reiterated the Air Force's position that the funds are excess to program needs but can be used to meet other program requirements. Since these funds will not be needed for subsystem integration on the F-15, we continue to believe the fiscal year 1999 budget request can be reduced by \$9.9 million.

**Evolved Expendable Launch Vehicle Program
(Space) (Line 93)**

The Air Force's fiscal year 1999 budget request of \$280.3 million for the Evolved Expendable Launch Vehicle program can be reduced by \$28.2 million because fiscal year 1999 program requirements are overstated. Recently, revised estimates show that the cost for the vehicle development planned for fiscal year 1999 will be \$28.2 million less than requested. DOD and the Air Force did not agree with the reduction, stating that the \$28.2 million is needed to adequately fund vehicle development. Also, the reduction would place key performance parameters and reliability at risk and threaten the commercial cost-sharing acquisition strategy for replacing existing launch vehicles. We do not have evidence that the reduction will jeopardize the Air Force's cost-sharing acquisition strategy or performance parameters. It was the Air Force's estimate that showed the developmental effort will cost less than budgeted; therefore, we continue to believe that the fiscal year 1999 budget request can be reduced by \$28.2 million.

F-15E Squadrons (Line 127)

The Air Force's fiscal year 1999 budget request of \$104.2 million for the F-15E Squadrons can be reduced by \$0.964 million because an equivalent amount of fiscal year 1998 funds is available to meet the fiscal year 1999 program requirements.

According to program officials, the \$0.964 million is being withheld by the Air Force and is expected to be reprogrammed for another Air Force requirement. Since the \$0.964 million in fiscal year 1998 funds will not be used for the F-15E program as planned, these funds can be used to offset the fiscal year 1999 budget request if they are not reprogrammed. DOD did not agree with the reduction and reiterated the Air Force's position.

DEFENSE-WIDE RDT&E PROGRAMS

DOD requested \$9.3 billion for defense-wide RDT&E programs in fiscal year 1999. As shown in table II.5, we identified a potential reduction of \$350 million to the fiscal year 1999 request and a potential rescission of \$66.7 million from the expiring fiscal year 1997 appropriation.

Table II.5: Potential Reductions and Rescission to Defense-wide RDT&E Programs

Dollars in millions

Line no.	Line item description	Fiscal year 1999		Potential rescission
		Request	Potential reduction	Fiscal year 1997
	RDT&E (inflation adjustment)	\$9,314.665	\$245.000	0
72	Theater High-Altitude Area Defense (THAAD) System - Theater Missile Defense (TMD) Demonstration and Validation (DEM/VAL)	497.752 ^a	105.000	0
96	Theater High-Altitude Area Defense (THAAD) System - Theater Missile Defense (TMD) Engineering and Manufacturing Development (EMD)	\$323.942 ^a	0	\$66.737
	Total		\$350.000	\$66.737

^aThis amount is part of the defense-wide RDT&E request of \$9,314.7 million.

Inflation Adjustment

If the Congress does not approve DOD's reprogramming request of \$66 million from the fiscal year 1998 funds, the defense-wide fiscal year 1999 RDT&E budget request of \$9.3 billion can be reduced by \$245 million because fiscal year 1999 program requirements are overstated by \$179 million and \$66 million in fiscal year 1998 funds are available to meet fiscal year 1999 program requirements.

The administration's current inflation forecast, projected levels of inflation for fiscal years 1999 and 1998 are lower than previously forecasted. According to DOD, the inflation reductions in the defense-wide RDT&E accounts are about \$179 million and \$66 million in fiscal years 1999 and 1998, respectively. The \$66-million inflation

adjustment is included in the fiscal year 1998 DOD omnibus reprogramming request. DOD did not agree with the reduction, stating that it plans to use these funds for other program priorities that were previously unfunded. Since program requirements have been reduced based on a lower than projected inflation rate, we continue to believe \$179 million can be reduced from the fiscal year 1999 budget request and \$66 million in fiscal year 1998 funds can be used to offset the fiscal year 1999 budget request.

Theater High-Altitude Area Defense (THAAD)
System - Theater Missile Defense (TMD)
Demonstration and Validation (DEM/VAL) (Line 72)

The Ballistic Missile Defense Organization's fiscal year 1999 budget request of \$497.8 million for Theater High-Altitude Area Defense - Theater Missile Defense can be reduced by \$105 million because the Army requested these funds to produce 40 prototype interceptors before adequately testing their capability. As a result of recent test failures, the Army no longer plans to produce the 40 interceptors.

At the time the fiscal year 1999 budget was submitted, the Army planned to exercise a contract option for 40 prototype interceptors, called User Operational Evaluation System interceptors, before testing provided a basis for assessing the system's operational effectiveness. This decision would have been premature because (1) it was to be based on a single successful intercept after five successive failures, the most recent of which occurred on May 12, 1998, and (2) the interceptor configuration to be used in the test would be different than the configuration to be produced. In July 1996, we issued a report on the Army's plan to commit funds for producing the 40 prototype interceptors to provide an early deployable capability.⁹ That report noted our concern that funding for these interceptors will be committed well before testing provides certain assurances of the system's effectiveness.

In its February 1998 report, the Panel on Reducing Risk in Ballistic Missile Defense Flight Test Programs recommended eliminating the interceptors and using those resources to develop the fully capable system. This Panel, whose members included former senior military, civilian, and industry leaders with extensive experience in the development, testing, and operational employment of complex weapon systems, observed that plans to produce a User Operational Evaluation System capability are inconsistent with the technical challenge. According to the Panel's report, the production of deployable prototype interceptors is unlikely to be productive and diverts attention from development of the fully capable system.

⁹Ballistic Missile Defense: Issues Concerning Acquisition of THAAD Prototype System (GAO/NSIAD-96-136, July 9, 1996).

The Army's project office stated that it no longer planned to exercise the ~~contract~~ option for the 40 interceptors. The project office has proposed to use some ~~of~~ the funds previously planned for the 40 interceptors to conduct risk reduction ~~activities~~, build a new ground test facility, and purchase a fewer number of prototype interceptors to be used primarily for testing. However, officials told us that ~~this~~ proposal has not been approved by DOD. As a result, we continue to believe that the fiscal year 1999 request can be reduced by the \$105 million originally budgeted for the User Operational Evaluation System interceptors. To implement the proposed new plan and other proposed program changes in fiscal year 1999, DOD will have to ask Congress to realign some of the funds originally appropriated for engineering and manufacturing development to the demonstration and validation effort (See the following discussion.) At that time, DOD will have an opportunity to provide the rationale and justification for its entire restructured program.

**Theater High-Altitude Area Defense (THAAD)
System - Theater Missile Defense (TMD) Engineering
and Manufacturing Development (EMD) (Line 96)**

The Ballistic Missile Defense Organization's \$66.737 million fiscal year 1997 appropriation for Theater High-Altitude Area Defense - Theater Missile Defense can be rescinded because the Army no longer plans to use the funds for the purpose for which they were appropriated. The Army's original plan would have committed the expiring funding for producing interceptors before adequately testing their capabilities. The Ballistic Missile Defense Organization has requested that these funds be reprogrammed from engineering and manufacturing development to the earlier phase of development, called program definition and risk reduction,¹⁰ so that the funds can be used for purchasing User Operational Evaluation System interceptors. However, we believe that the Army's plan would have prematurely committed funding to produce the interceptors (see pp. 50 and 51 for details describing the rationale for our position).

Since DOD's reprogramming request was submitted, the system failed its fifth consecutive flight test attempt, and project officials told us they no longer planned to contract for the 40 prototype interceptors. They also told us that they are proposing to use the expiring funds for other program definition and risk/reduction activities, thereby making increased funding available for a proposed program restructuring beginning in fiscal year 1999. However, this proposal has not been approved by the DOD. Since the \$66.737 million in fiscal year 1997 funds will expire if not obligated by September 30, 1998, they are available for reprogramming or rescission during the

¹⁰Previously called the demonstration and validation phase.

remainder of fiscal year 1998. To implement the project office's revised plans, DOD will have to ask the Congress to realign some of the funds originally requested for engineering and manufacturing development in fiscal year 1999 to the program definition and risk reduction effort. At that time, DOD will have an opportunity to provide the rationale and justification for its entire restructured program.

SCOPE AND METHODOLOGY

We reviewed DOD's procurement and RDT&E programs that we identified from our ongoing assignments and the initial phase of this assignment as having cost, schedule, performance, programmatic, or acquisition issues. To achieve our objectives of identifying potential reductions to the fiscal year 1999 requests and potential rescissions of prior years' appropriations, we interviewed program officials and reviewed program documentation such as budget requests and justifications, monthly program status reports, correspondence, briefing reports, and accounting and financial reports.

We conducted various analyses based on the data obtained on program status, test results, and contract awards. Our analyses included assessments of potential effects of changes or decisions that occurred after the budget submission, such as delays in testing schedules and contract negotiations, decisions to postpone planned procurement, and changes in program start-ups. We also assessed planned system buys based on changes in funding decisions. In addition, we evaluated test results for problems encountered and appraised the potential effect of test results on current procurement plans. We assessed program funding needs as they related to systems' development progression and evaluated production problems and their impact on funding requirements.

We performed our work at numerous DOD and military service organizations. Some of the organizations we visited were

- Office of the Secretary of Defense and Army, Navy, and Air Force headquarters, Washington, D.C.;
- Secretary of the Army for Research, Development and Acquisition, Washington, D.C.;
- Tank, Automotive and Armament Command (TACOM), Warren, Michigan;
- Army Missile Command and Ballistic Missile Defense Organization, Huntsville, Alabama;
- Armament and Chemical Acquisition and Logistics Activity, Rock Island Arsenal, Huntsville, Alabama
- Program Executive Office, Theater Missile Defense, Huntsville, Alabama;
- Naval Air Systems Command, Headquarters, Patuxent River, Maryland;
- Naval Sea Systems Command, Headquarters, Arlington, Virginia;
- Naval Undersea Warfare Center Newport Division, Middletown, Rhode Island;
- Air Force Materiel Command, Aeronautical Systems Center, Wright-Patterson Air Force Base, Ohio;

- Eglin Air Force Base, Florida;
- Air Force Materiel Command, Space and Missile System Center, Los Angeles, California; and
- U.S. Special Operations Command, Tampa, Florida.

We conducted our review from March 1998 to June 1998 in accordance with generally accepted government auditing standards.

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**Official Business
Penalty for Private Use \$300**

Address Correction Requested
