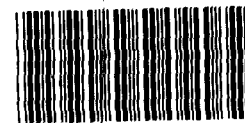


September 1993

1994 DEFENSE BUDGET

Potential Reductions, Rescissions, and Restrictions to Procurement Programs



150026



**United States
General Accounting Office
Washington, D.C. 20548**

**National Security and
International Affairs Division**

B-255039

September 30, 1993

Congressional Committees

We examined the Department of Defense's fiscal year 1994 budget request and prior years' appropriations for selected procurement programs. Our objectives were to identify potential reductions to the fiscal year 1994 budget request and potential rescissions to prior years' appropriations. We also identified potential restrictions the Congress can place on the obligational authority for certain procurement programs. This report summarizes information and briefings provided to your staffs from May to September 1993. This is one of a series of reports that examines defense budget issues.

Our review showed that schedule delays, changes in the threat, changes in program requirements, and questions that have arisen since the procurement budget request was developed provide the opportunity to reduce the funding levels for fiscal year 1994 as well as for prior years' appropriations. As shown in table 1, we identified potential budget reductions of about \$1,981.9 million to the fiscal year 1994 budget request and potential rescissions of approximately \$902.2 million to prior years' appropriations. We also identified approximately \$1,178.9 million in requested funding that the Congress can restrict.

Table 1: Potential Reductions, Rescissions, and Restrictions to Department of Defense Procurement Programs

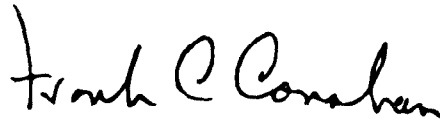
Dollars in millions			
Agency	Potential fiscal year 1994 reductions	Potential prior year rescissions	Potential restrictions
Army (see app. I)			
Aircraft Procurement	\$9.8	•	•
Missile Procurement	16.0	\$10.1	\$230.0
Wheeled and Tracked Combat Vehicles	•	•	192.4
Other Procurement	208.3	41.7	368.8
Navy (see app. II)			
Weapons Procurement	•	47.8	•
Shipbuilding and Conversion	35.2	110.4	143.3
Other Procurement	24.0	384.1	•
Air Force (see app. III)			
Aircraft Procurement	1,285.5	159.3	234.4
Missile Procurement	353.2	88.8	•
Other Procurement	20.1	•	•
Multiservice and Defensewide Programs (see app. IV)			
Aircraft Procurement	19.9	•	•
Procurement	9.9	•	10.0
National Guard and Reserve Equipment	•	60.0	•
Total	\$1,981.9	\$902.2	\$1,178.9

We focused on program cost, schedule, and performance issues and examined expenditure documents to determine whether requests were adequately justified and whether unobligated funds from prior appropriations should be retained. We also evaluated budgetary implications of program changes resulting from threat changes the Department of Defense identified. Appendix V provides information regarding our scope and methodology.

We did not obtain written agency comments on a draft of this report. However, we did discuss the details in this report with program and Office of the Secretary of Defense officials and incorporated their comments where appropriate.

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 report was prepared under the direction of Louis J. Rodrigues, Director, Systems Development and Production Issues, who may be reached on (202) 512-4841 if you or your staffs have any questions. Other major contributors to this report are listed in appendix VI.



Frank C. Conahan
Assistant Comptroller General

List of Congressional Committees

The Honorable Sam Nunn
Chairman
The Honorable Strom Thurmond
Ranking Minority Member
Committee on Armed Services
United States Senate

The Honorable Daniel K. Inouye
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The Honorable Floyd D. Spence
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Committee on Armed Services
House of Representatives

The Honorable John P. Murtha
Chairman
The Honorable Joseph M. McDade
Ranking Minority Member
Subcommittee on Defense
Committee on Appropriations
House of Representatives

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Abbreviations

AMRAAM	Advanced Medium Range Air-to-Air Missile
DOD	Department of Defense
GEODSS	Ground-based Electro Optical Deep Space Surveillance
HMMWV	High Mobility Multipurpose Wheeled Vehicle
MOD 7	Modification Seven
TOW	Tube-launched, Optically-tracked, Wire-guided

Potential Reductions, Rescissions, and Restrictions to Army Procurement Programs

We identified about \$234.1 million in potential reductions in the Army fiscal year 1994 procurement budget request, \$51.8 million in potential rescissions in fiscal year 1992 and 1993 funds, and about \$791.2 million in potential restrictions to the Army's obligational authority for fiscal year 1994 procurement budget requests. The following section provides a brief description of our analysis and proposed actions. Table I.1 summarizes the proposed actions.

Table I.1: Summary of Potential Reductions, Rescissions, and Restrictions to Army Programs

Dollars in millions

Program	Potential fiscal year 1994 reductions	Potential prior year rescissions	Potential restrictions	See page
Aircraft Procurement				
AH-64 Modifications	\$4.900	•	•	13
Industrial Facilities	4.921	•	•	14
Subtotal	9.821	•	•	
Missile Procurement				
Hellfire	13.900	•	•	15
Javelin	2.100	•	\$205.168	17
Tube-launched, Optically-tracked, Wire-guided Missile	•	\$10.100	15.000	19
Multiple Launch Rocket System	•	•	9.801	20
Subtotal	16.000	10.100	229.969	
Wheeled and Tracked Combat Vehicles				
Bradley Base Sustainment Program	•	•	192.437	22
Subtotal	•	•	192.437	
Other Procurement				
High Mobility Multipurpose Wheeled Vehicle	•	•	53.313	22
Palletized Load System	113.301	•	315.471	25
Joint Surveillance Target Attack Radar System	57.900	35.200	•	26
Advanced Field Artillery Tactical Data System	21.130	•	•	27
Combat Service Support Control System	12.833	•	•	29
Initial Spares-Program Executive Office, Command and Control Systems	3.100	•	•	30
Water Purification Unit, Reverse Osmosis, 3,000 Gallons Per Hour	•	4.900	•	30
Spares and Repair Parts	•	1.600	•	31
Subtotal	208.264	41.700	368.784	
Total	\$234.085	\$51.800	\$791.190	

Appropriation

Aircraft Procurement, Army

AH-64 Modifications

In its fiscal year 1994 budget request, the Army requested about \$46.4 million for AH-64 Apache helicopter modifications to improve the Apache's operational reliability, availability, and maintainability. These modifications include the integration of the Global Positioning System and nap-of-earth communications into the Apache helicopter.

Results of Analysis

The Congress can reduce the Army's fiscal year 1994 request of approximately \$46.4 million for Apache modifications by \$4.9 million. When developing its fiscal year 1994 budget estimates, the Army used an incorrect inflation factor and an overstated unit price for the Global Positioning System. As a result, the budget estimate was overstated by \$1.1 million. Army officials said that the \$1.1 million is to be used for an estimated higher cost of a reconfigured system. However, as of September 3, 1993, the program office could not provide documentation to support the increased cost of the system. In addition, \$3.8 million requested for a corrosion control modification is not required in fiscal year 1994. At the time of our review, the Army was not planning to sign a contract for the modification until fiscal year 1995. Also, at that time, a program official acknowledged that the modification is not a high priority and could be delayed until the fiscal year 1995 budget request.

On September 2, 1993, Army officials said that the Army had elevated the priority of the modification and that the funds for the modification would be obligated in fiscal year 1994. However, on September 3, 1993, a program official said that the program manager's office expected to receive one of the four remaining engineering change proposals required to complete the corrosion control modification during the first quarter of fiscal year 1994, with the remaining three proposals expected during the second quarter of fiscal year 1994. Normally, the time period required between receipt of a proposal and the award of a contract is about 12 months. Consequently, the contract award for the corrosion control modification will likely occur in fiscal year 1995.

**Table I.2: AH-64 Modifications
 Funding/Request and Potential
 Reduction**

Budget line	Fiscal year		
	1992	1993	1994
	Dollars in millions		
11	\$74.971	\$64.924	\$46.392
Potential reduction	•	•	4.900

the presence of countermeasures. The Army awarded the first production contract for Hellfire II missiles to the Martin Marietta Corporation in May 1993.

Results of Analysis

The Army's fiscal year 1994 request of approximately \$92.5 million for Hellfire missiles can be reduced by \$13.9 million because of uncertainties regarding the expenditure. The Army requested \$13.9 million to establish a depot maintenance capability at the Anniston Army Depot. Of this amount, \$4.2 million is for moving and refurbishing, tooling, test equipment, and other government property at Rockwell International when the production line for older versions of Hellfire missiles shuts down. The remaining \$9.7 million is for additional maintenance equipment, including test sets, to be used at Anniston.

However, the plans for establishing the maintenance capability at Anniston are uncertain because the Defense Base Closure and Realignment Commission has recommended that the missile maintenance operations at Anniston be closed and consolidated at another depot. In addition, program management officials acknowledged that they did not have an approved plan to set up this effort.

Program management officials agreed that it would not be prudent to establish the maintenance capability at Anniston if a move were required shortly thereafter. However, they believe that the capability is a valid requirement and that it will have to be established somewhere. We believe that the funding should be requested when (1) the location of the capability is established, (2) the timing of the establishment is settled, and (3) a more definitive cost estimate is available.

Table I.4: Hellfire Funding/Request and Potential Reduction

Budget line	Fiscal year		
	1992	1993	1994
8	\$11.689	\$82.903	\$92.535
Potential reduction	•	•	13.900

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The detailed proposal for long lead time items was received on August 21, 1993, but the contract has not been awarded. According to the project manager, any further delay in awarding the contract could extend the beginning of low-rate initial production into fiscal year 1995.

The production funds can be restricted because (1) the long lead time items contract has not been awarded and (2) estimates vary as to how soon production could begin after awarding the contract. Based upon the date of proposal receipt, some estimates show that the production contract could be awarded in fiscal year 1994; others show that the award could occur in fiscal year 1995.

Table I.5: Javelin Request and Potential Reduction and Restriction

Budget line	Fiscal year		
	1992	1993	1994
	Dollars in millions		
9	•	•	\$207.268
Potential reduction	•	•	2.100
Potential restriction	•	•	205.168

Appropriation

Missile Procurement, Army

**Tube-launched,
Optically-tracked,
Wire-guided Missile**

The Tube-launched, Optically-tracked, Wire-guided (TOW) missile is a heavy antitank and assault weapon system consisting of a missile, a launcher, and ground support equipment. The Army is currently producing two versions of the TOW missile—the TOW 2A and the TOW 2B. The TOW 2B missile is designed to be an improvement of the TOW 2A missile in terms of lethality. The Army procures TOW missiles for its use and for the Marine Corps. The Army does not have firm production plans past fiscal year 1993.

Results of Analysis

The Congress can restrict obligational authority for \$15 million of the Army's fiscal year 1994 request of approximately \$25.3 million for the TOW missile system. Additionally, the Congress can rescind \$10.1 million in the Army's fiscal year 1993 funds of approximately \$182 million because the Army does not plan to use the funds for the purposes for which they were intended.

Fiscal Year 1993 Funding

Congressional approval has been given to reprogram \$48 million of the Army's fiscal year 1993 funding to buy TOW missiles for the Marine Corps, and \$23.9 million has been released to the TOW project office to buy additional TOW 2B for the Army. However, according to an official at the Office of the Assistant Secretary of the Army for Research, Development, and Acquisition, the remaining funds will be used for higher priority items. Therefore, the Congress can rescind \$10.1 million because the funds will not be used for the purposes for which they were provided.

**Table I.6: TOW Missile
 Funding/Request and Potential
 Rescission and Restriction**

Dollars in millions			
Budget line	Fiscal year		
	1992	1993	1994
11	\$200.607	\$182.023	\$25.282
Potential rescission	•	10.100	•
Potential restriction	•	•	15.000

Appropriation

Missile Procurement, Army

**Multiple Launch Rocket
 System**

The Multiple Launch Rocket System consists of a tracked self-propelled launcher-loader, disposable launch pods, and fire control equipment. The system is designed to provide a high volume of fire in a short period of time. It is mounted on a derivative of the Bradley Fighting Vehicle and requires three crew members to operate. The system is used in counterfire and air defense suppression.

Results of Analysis

The Congress can restrict the obligational authority for \$9.8 million the Army requested in fiscal year 1994 until foreign military sales for the Multiple Launch Rocket System become firm. The Army request for the Multiple Launch Rocket System is to maintain production facilities, but whether the funds will be needed or not will depend on the level of foreign military sales of the system.

The Army plans to use the funding to maintain both rocket motor and warhead production facilities in fiscal year 1994, but the facilities may be maintained in ready-for-production status without the request. The Army plans to maintain the rocket motor and warhead production facilities in 1994 and the warhead production facilities through fiscal year 1997. Maintaining and exercising the equipment will keep the production line

new components, such as the engine, radiator, armor plate, and swim system, and the rebuilding of old components, such as the transmission, turret drive system, communication system, and heater.

The Congress initiated this program by providing approximately \$124.6 million in fiscal year 1993 and directed the Army to develop a program to sustain the Bradley production base through a combination of new production and the upgrade of older models. The Department of Defense (DOD) withheld the fiscal year 1993 funds until the Army decided upon the number of vehicles to be produced and upgraded under the program. The new production portion of the program will use \$70.8 million of the fiscal year 1993 funds to produce 54 new vehicles and bridge the production gap between the end of the current production contract in October 1994 and the start of the upgrade of A0 models in February 1995. The 54 new vehicles will allow the Army to reach its acquisition objective of 6,724 vehicles. The Army plans to use the remaining \$53.8 million of fiscal year 1993 funds to upgrade 41 A0 models, including 6 vehicles in the remanufacturing pilot test. The Army requested approximately \$192.4 million in fiscal year 1994 to upgrade 131 additional A0 models. The Army plans to upgrade a total of 628 A0 model Bradleys through fiscal year 1999.

Results of Analysis

The Congress can restrict obligational authority for approximately \$192.4 million in the Army's fiscal year 1994 request for the Bradley sustainment program until the Army completes an upgrade pilot program and develops firm cost estimates for the upgrade portion of the program. The current cost estimates for the upgrade, while based on the most current information, are rough figures. For example, the Army has not defined the scope of work necessary to perform the upgrade of the A0 models. Bradley program personnel told us that when they developed the cost estimates they had to make assumptions about the parts required, if parts would be procured new or rebuilt, and whether any rebuild effort would be performed at Army depots or contractor facilities. Also, the cost estimate for the components was based on historical cost data, which were based on past purchases at substantially higher vehicle production rates than planned. The per item component costs will likely increase as the vehicle production rates decrease. Consequently, the current cost estimates are subject to change based on the outcome of the pilot program as well as final negotiated prices. Program officials agreed that this information is correct.

allowing one soldier to load or unload up to 24 pallets of ammunition on a flatrack at one time instead of individually loading pallets with a forklift or a crane. The Army requested approximately \$464.3 million in fiscal year 1994 funding for the program, including \$315.5 million for 945 trucks, 442 trailers, and 3,917 flatracks included in the fifth and final year of the contract and \$113.3 million for upgraded flatracks to be acquired through competitively awarded contracts as a set-aside procurement for small business. The Army plans to use the remaining \$35.5 million for engineering changes, testing, and kits for the system.

Using prior fiscal year funding, the current load system contractor increased production of 31 trucks per month to full-rate production of 76 trucks per month in August 1993. The Army plans to obligate the fiscal year 1994 funding for the contract in November 1993.

Results of Analysis

The Congress can reduce the Army's fiscal year 1994 request of approximately \$464.3 million for the Palletized Load System by about \$113.3 million because the estimated funding requirement for the small business contracts for the upgraded flatracks will not be needed until fiscal year 1995. Also, the Congress can restrict the obligational authority for approximately \$315.5 million in fiscal year 1994 funding for the system contract until the Office of the Secretary of Defense and the Army resolve their conflicting conclusions on whether the load system has demonstrated the capability to meet reliability, availability, and maintainability requirements during operational testing.

Upgraded Flatracks

The program to develop an upgraded flatrack is behind schedule, and the current milestones leading to the planned September 1994 contract awards appear optimistic because of the program's past history of milestone slippage. For example, the current November 1993 interim milestone for a production decision upon completion of design, fabrication, and testing of prototypes represents an 11-month slippage from the previous milestone date. In addition, current milestone dates are more optimistic than earlier ones. The Army now plans to make the production decision the month after completion of testing, while earlier plans allowed for a 3-1/2-month period between the two milestones.

Further, we found no compelling reason that requires late fiscal year 1994 awards, instead of early fiscal year 1995 awards, even if the Army could make the awards prior to fiscal year 1995. Because these are initial contract awards, a delay would not stop ongoing production of the

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cannot resolve their differences before February 1994 or (2) the Army should continue to procure a system when key parties cannot agree on its reliability, availability, and maintainability. Therefore, to ensure that the Army does not proceed with the load system program until the requirements are met, a restriction on the obligational authority for the program seems warranted.

**Table I.10: Palletized Load System
Funding/Request and Potential
Reduction and Restriction**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
8	\$99.243	\$309.492	\$464.258
Potential reduction	•	•	113.301
Potential restriction	•	•	315.471

Appropriation

Other Procurement, Army

**Joint Surveillance Target
Attack Radar System**

The Joint Surveillance Target Attack Radar System is designed to detect and track moving and stationary enemy armor, vehicles, and troops over a wide area. It also provides targeting information to attack aircraft pilots, artillery batteries, and standoff missile units. The system is comprised of airborne and ground segments and is a joint Air Force and Army program with the Air Force as the lead service. The Army requested \$57.9 million in fiscal year 1994 funds for the system, and it plans to use these funds, along with \$35.2 million in fiscal year 1993 funding, to procure 12 medium ground station modules. The 12 medium ground station modules, configured to operate on 5-ton trucks, constitute the total buy. The medium ground station modules will be used with existing ground station modules to more fully equip an Army contingency corps.

Results of Analysis

The Army's fiscal year 1994 request of \$57.9 million for the Joint Surveillance Target Attack Radar System can be denied and fiscal year 1993 funding of \$35.2 million can be rescinded because production of the Army's medium ground station modules should be delayed until reliability problems are resolved. The current interim and developmental ground stations are available to provide the level of interim capability agreed upon by the Army and the Air Force. Thus, risks of premature medium ground station module production can be avoided.

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by about \$21.1 million because (1) the tactical data system's operational testing has been delayed, (2) the computers are not required this fiscal year, and (3) existing computers can be used to equip training classrooms. This amount can be requested in the next fiscal year.

Although the tactical data system's initial operational test was scheduled to begin in February 1994, the start of the testing has slipped to May 1994 because the unit to be involved in the test is unavailable. This delay has also caused the production decision to slip from April 1994 to October 1994.

An Army program executive office official agreed that the request for 273 computers was premature, but maintained that approximately \$8 million is still necessary to build and equip training classrooms at the Artillery School in Fort Sill, Oklahoma. The Army intends to spend about \$4.3 million of the approximately \$8 million to award a January 1994 contract to equip classrooms with 63 new, faster computers. Army officials told us that the approximately \$3.8 million remaining is needed mainly for other equipment, engineering support, and classroom construction. Army officials stated that they want to conduct the classroom training using the same computers the tactical data system is expected to field.

Our review indicates that the Army can use existing computers instead of awarding the contract for about \$4.3 million for 63 newer model computers to equip training classrooms. The Army already has acquired and upgraded hardware for the tactical data system and other Army Tactical Command and Control System programs. For example, the tactical data system program has acquired 211 computers, of which 182 have been upgraded and could be used to equip classrooms. Furthermore, the Army upgraded another 225 computers to field the Maneuver Control System, but that program is experiencing more than a 2-1/2-year delay due to contractor performance problems (its full-rate production decision milestone has slipped from August 1993 to April 1996). The Army also could use some of these 225 computers to equip classrooms because these computers would operate on the same software as existing computers.

**Table I.12: Advanced Field Artillery
Tactical Data System Request and
Potential Reduction**

Budget line	Fiscal year		
	1992	1993	1994
79	•	•	\$24,892
Potential reduction	•	•	21,130

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Table I.13: Combat Service Support Control System Request and Potential Reduction

Budget line	Fiscal year		
	1992	1993	1994
	82	•	•
Potential reduction	•	•	12.833

Appropriation

Other Procurement, Army

Initial Spares-Program Executive Office, Command and Control Systems

The Army's fiscal year 1994 other procurement request of \$20.1 million for command and control systems' initial spares covers seven systems. Of the \$20.1 million, \$3.1 million was requested for spares for the Advanced Field Artillery Tactical Data System, the Combat Service Support Control System, and the Maneuver Control System to support initial fielding of these three new systems.

Results of Analysis

The Army's fiscal year 1994 request of \$20.1 million for initial spares for command and control systems can be reduced by \$3.1 million because funds for the Advanced Field Artillery Tactical Data System, the Combat Service Support Control System, and the Maneuver Control System will not be required until at least fiscal year 1995, when the Army expects to approve the systems for production.

Both the Advanced Field Artillery Tactical Data System and the Combat Service Support Control System (budget line item numbers 79 and 82, respectively) are expected to undergo operational tests in the summer of 1994 and are scheduled for production decisions in early fiscal year 1995. The Maneuver Control System program is experiencing more than a 2-1/2-year delay. The system's operational test schedule has slipped to fiscal year 1996, and its Army production decision has been deferred to April 1996. Therefore, funding for spare parts for these systems is not needed in fiscal year 1994.

An Army program executive office official agreed that the request for spares was premature in the cases of the Advanced Field Artillery Tactical Data System, the Maneuver Control System, and the Combat Service Support Control System because the systems' schedules are slipping and fieldings will not occur until at least fiscal year 1995.

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Results of Analysis

The Congress can rescind \$1.6 million of the Army's fiscal year 1993 spares and repair parts funds. An Aviation and Troop Command official said the Command returned its allocation of \$5 million to the U.S. Army Materiel Command because it did not have a requirement for the funds. The Materiel Command reprogrammed \$3.4 million of these funds to an overall spares budget line, leaving \$1.6 million unobligated as of July 30, 1993. An Aviation and Troop Command official said that the \$1.6 million was being held for future requirements.

**Table I.16: Spares and Repair Parts
Funding/Request and Potential
Rescission**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
161	•	\$10.105	\$7.182
Potential rescission	•	1.600	•

Appropriation

Weapons Procurement, Navy

Drones and Decoys

The Navy's Drones and Decoys program includes the Improved Tactical Air Launched Decoy vehicles. The decoy vehicles use radar signature augmentation and preplanned flight profiles to (1) simulate manned aircraft, (2) deceive and saturate hostile radar-controlled air defense, and (3) enhance friendly strike aircraft survivability. The decoy has an engine and a radar altimeter to provide increased speed and greater range than the non-powered decoy.

The program was started in fiscal year 1992 when the Congress appropriated \$10 million for 90 Decoy vehicles. The \$17.4 million in fiscal year 1993 funds was to buy 147 decoy vehicles. The Navy did not request fiscal year 1994 funds for the Drones and Decoys line item.

Results of Analysis

The Congress can rescind \$10 million of the Navy's fiscal year 1992 funds for the decoy vehicles because the Navy (1) will not award a low-rate initial procurement contract for 90 low-rate initial procurement decoys as originally planned, (2) will not award a production contract until after fiscal year 1994 development test flights are completed and the results analyzed, and (3) has sufficient fiscal year 1993 funds to award a March 1994 contract for 128 decoy vehicles.

Program officials told us that the Navy planned to combine the fiscal year 1992 and fiscal year 1993 funds for a single contract award for 237 decoy vehicles in March 1994. They also told us that, if the Congress rescinds the fiscal year 1992 appropriation of \$10 million, the Navy could only buy 128 decoy vehicles, which would delay the initial operational capability planned for 50 decoy vehicles.

Table II.2: Drones and Decoys Funding and Potential Rescission

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
15	\$10.000	\$17.403	•
Potential rescission	10.000	•	•

Appropriation

Shipbuilding and Conversion, Navy

SLQ-32 Shipboard Electronic Warfare System

The SLQ-32 is the Navy's primary electronic warfare system to protect ships against threat missiles, such as the Exocet used by Iraq in 1987 to attack the U.S.S. Stark. The SLQ-32 system is intended to provide this protection by identifying the source of electronic emissions associated with threat weapons. The system also has other classified capabilities. The Navy's request for fiscal year 1994 includes \$35.2 million to procure four more SLQ-32 systems.

Results of Analysis

The Navy's fiscal year 1994 budget request can be reduced by about \$35.2 million because the Navy has not yet demonstrated that the SLQ-32 system's deficiencies have been corrected. In addition, the Navy's unobligated prior year funds of about \$101.1 million—\$39 million in fiscal year 1992 funds and \$62.1 million in fiscal year 1993 funds—can be rescinded to prevent further premature acquisition of systems.

The system's performance has been flawed throughout its history. Its performance remains questionable despite many design changes to correct deficiencies and improve the system. Although the Navy has stated that 1992 tests proved the system effective and suitable, our August 19, 1993, report showed that the tests were insufficient to determine whether the system's problems had been solved.¹

The Navy was unable to demonstrate that certain system problems had been solved because it did not create representative combat conditions during the tests. In addition, the Navy omitted testing of SLQ-32 maintainability, although SLQ-32 maintainability has been a continuing problem. Furthermore, the Navy excluded tests of system modifications, some of which had previously proven to be defective.

Navy program officials disagreed with these proposed funding actions. They continued to maintain that the system had been thoroughly tested in 1992 and that the test environment, specified in the test plan and approved by the Navy's independent test agency, confirmed the system's ability to operate in a realistic environment. They also stated that maintainability testing had been conducted in 1992, which, when combined with maintainability tests done in 1982, demonstrated that all maintainability thresholds had been met. In addition, the officials stated that 1992 testing

¹Electronic Warfare: Inadequate Testing Led to Faulty SLQ-32s on Ships (GAO/NSIAD-93-272, Aug. 19, 1993).

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The Navy did not request fiscal year 1994 funds for the MHC Coastal Minehunter program.

Results of Analysis

The Congress can rescind about \$9.3 million of the fiscal year 1993 funds because the Navy's contract award of about \$225.3 million was less than the amount appropriated for the construction of the MHC Coastal Minehunters. Navy Comptroller officials told us that the \$9.3-million savings achieved is in excess to program requirements, and that the Navy has proposed applying the fiscal year 1993 excess funds to the ship cost adjustment account.

**Table II.5: Coastal Minehunter, MHC-51
Class Funding and Potential
Rescission**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
13	\$313.407	\$234.642	•
Potential rescission	•	9.343	•

Appropriation

Shipbuilding and Conversion, Navy

**AOE Fast Combat Support
Ship**

The AOE Fast Combat Ship operates as an integral unit of a carrier battle group. It receives petroleum products, ammunition, provisions, and other stores from shuttle ships for rapid distribution to battle group units using connected underway replenishment and vertical replenishment with helicopters.

On January 15, 1993, the Navy awarded a contract totaling \$365.8 million with \$181.5 million of fiscal year 1992 funds and \$184.3 million of fiscal year 1993 funds for detail design and construction of the AOE 10 Fast Combat Support Ship. On the same date, the Navy also exercised a contract option using fiscal year 1992 funds of about \$17.6 million for AOE 10 equipment.

Results of Analysis

The Congress can restrict the Navy's obligational authority for about \$143.3 million in prior year funds, about \$8.9 million in fiscal year 1992 funds, and \$134.5 million in fiscal year 1993 funds, to preclude further expenditures under the AOE contract until the current need for the ship can be reevaluated. The program office provided funding information

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showing that the Navy had awarded contracts totaling \$383.4 million for the AOE 10 and equipment, leaving about \$8.9 million in fiscal year 1992 funds and about \$134.5 million in fiscal year 1993 funds not on contract.

Our August 1993 report² detailed continuing schedule and cost difficulties with this program and raised a number of questions about the need for the AOE 10. We recommended that the Secretary of Defense direct the Secretary of the Navy to reevaluate the current need for the AOE 10 and, if the evaluation does not support the need, the ship construction contract should be terminated.

The program office stated that information on the termination cost or potential savings that could be achieved by deobligating the funds does not exist, and it would take a great deal of time and effort to determine the final termination costs.

Table II.6: AOE Fast Combat Support Ship Funding and Potential Restrictions

Budget line	Fiscal year		
	1992	1993	1994
15	•	\$298.084	•
Potential restriction	•	134.500	•
16	\$199.100	•	•
Potential restriction	8.848	•	•

Appropriation

Other Procurement, Navy

Installation Funds Annualization

Installation funds annualization is a Navy procurement policy change affecting the fiscal years 1990-94 Other Procurement, Navy budgets. The policy was changed from funding installation costs of newly purchased equipment in the year of purchase to funding in the year of installation.

Results of Analysis

The Congress can rescind about \$86.4 million in the Navy's fiscal year 1992 funds and \$104.2 million in fiscal year 1993 funds because the full funding policy on acquisition programs was changed to annual funding.

²Navy Contracts: AOE 6 Shipbuilding Claims Settled But More Delays and Cost Growth Likely (GAO/NSIAD-93-118, Aug. 23, 1993).

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The budgetary impact of implementing the Navy's procurement policy change on the annualization of installation funds involves the possibility of double funding for installation costs. Costs already funded under the old policy may be duplicated under the new policy. Also, many of the funds that were appropriated under the old policy became excess to current year requirements under the new policy. The amount of the excess installation funds totals about \$190.6 million—about \$86.4 million in fiscal year 1992 funds and \$104.2 million in fiscal year 1993 funds.

The fiscal year 1994 line items, their descriptions, and the amounts of potential rescissions for fiscal years 1992 and 1993 are shown in table II.7. Subsequent tables of appendix II provide additional potential rescissions to some programs listed in table II.7. These tables do not duplicate or incorporate potential rescissions provided in the table below.

**Table II.7: Potential Rescissions
Related to Policy Changes in
Installation Funds Annualization**

Budget line	Description	Fiscal year	
		1992	1993
5	Other generators	\$7.664	•
12	Underway replenishment equipment	6.100	\$19.000
18	Pollution control equipment	1.596	•
25	Hull, mechanical and electrical under \$2 million	•	0.800
42	Modernization support equipment	28.500	48.400
59	Surface Ship Torpedo Defense	•	8.500
68	AN/SLQ-32V Electronic Support	•	27.500
83	Navy Tactical Data System	6.374	•
85	Link 16	4.568	•
96	Automatic Carrier Landing System	6.686	•
113	Shipboard Tactical Communications	24.924	•
Total		\$86.412	\$104.200

Appropriation

Other Procurement, Navy

Somalia Relief Program

The Navy set aside about \$86.4 million in fiscal year 1993 funds from several Other Procurement, Navy line items to help fund the Somalia relief effort.

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Results of Analysis

The Congress can rescind about \$86.4 million in fiscal year 1993 funds from four Other Procurement, Navy line items because the fiscal year 1993 funds that were set aside from those accounts for Somalia relief were not used for that purpose.

A Navy Comptroller official told us that the Defense Supplemental Appropriations Act of Fiscal Year 1993 provided all funding for Somalia relief and that the fiscal year 1993 funds that were set aside are available for reprogramming.

The following line items were the sources of fiscal year 1993 funds that the Navy had set aside for Somalia relief.

**Table II.8: Potential Rescissions
Related to Somalia Relief Program
Funding**

Dollars in millions

Budget line	Description	Fiscal year 1993
44	AN/SPS-48 Radar	\$34.200
83	Navy Tactical Data System	12.700
157	Catapults and arresting gear	17.500
202	Amphibious equipment	22.000
Total		\$86.400

Appropriation

Other Procurement, Navy

Standard Boat Program

The Navy's Standard Boat program funds the purchase of replacement boats for Navy fleet/shore activities. The approximately \$22.8 million in fiscal year 1993 funds included about \$5 million to buy 20 Encapsulated Lifeboats for the Military Sealift Command.

Results of Analysis

The Congress can rescind about \$5 million of the Navy's fiscal year 1993 funds because the Military Sealift Command does not need the 20 Encapsulated Lifeboats. The Navy Comptroller has placed just over \$5 million in fiscal year 1993 funds on hold. Program officials told us that the remaining fiscal year 1993 procurement program for this line item can be executed with about \$17.7 million.

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**Table II.9: Standard Boat Program
Funding/Request and Potential
Rescission**

Dollars in millions			
Budget line	Fiscal year		
	1992	1993	1994
36	\$20.313	\$22.766	\$9.350
Potential rescission	•	5.030	•

Appropriation

Other Procurement, Navy

AN/BQQ-5 Sonar Sensor

The AN/BQQ-5 sonar is an acoustical system designed to provide submarine stealth capabilities. Program funds are to buy retrofit kits to upgrade the AN/BQQ-5D version system to the AN/BQQ-5E version. The upgraded sonar system is designed to provide SSN-688 submarines with capabilities for long-range detection and localization of threats.

The Navy's fiscal year 1993 funds of about \$123.2 million include about \$37.5 million to buy four AN/BQQ-5D retrofit kits, which will complete the Navy's BQQ-5 procurement program. A new program, called SSN Acoustics, is replacing the AN/BQQ-5 program in fiscal year 1994. The Navy Comptroller has placed approximately \$72.3 million, which includes about \$37.5 million for four AN/BQQ-5s, of fiscal year 1993 funds on hold until all AN/BQQ-5E requirements are reassessed.

Results of Analysis

The Congress can rescind about \$9.4 million for one AN/BQQ-5E sonar system. The funds can be rescinded because the submarine Baton Rouge is being decommissioned and the sonar system will not be needed on that ship. This sensor can be removed and reinstalled, where needed, thus reducing the requirement for new kits by one.

**Table II.10: AN/BQQ-5 Sonar Sensor
Funding and Potential Rescission and
Restriction**

Dollars in millions			
Budget line	Fiscal year		
	1992	1993	1994
52	\$126.086	\$123.214	•
Potential rescission	•	9.370	•

Appropriation

Other Procurement, Navy

**AN/SQQ-89(V) Surface
 Anti-Submarine Warfare
 Combat Systems**

The AN/SQQ-89(V) is the fully integrated surface ship anti-submarine warfare combat system designed to detect, classify, track, and coordinate submarine targets for new DDG-51 class ships. It is also being retrofitted on the CG-47 and DDG-993 class ships.

The Navy's fiscal year 1993 funds of about \$149.6 million include funds for 11 AN/SQQ-89(V)s. The fiscal year 1994 budget request of about \$88.1 million includes funds for six AN/SQQ-89(V)s and production engineering.

Results of Analysis

The Congress can rescind \$33.3 million from the Navy's fiscal year 1993 unobligated funds because fiscal year 1993 contract prices for the AN/SQQ-89(V) components were negotiated for \$33.3 million less than the amount appropriated.

The Navy Comptroller has placed the \$33.3 million on hold pending approval for reprogramming. Program officials told us that they plan to use the fiscal year 1993 contract savings of \$33.3 million for ship cost adjustment shortfalls.

**Table II.11: AN/SQQ-89(V) Surface
 Anti-Submarine Warfare Combat
 Systems Funding/Request and
 Potential Rescission**

Budget line	Fiscal year		
	1992	1993	1994
51	\$241.499	\$149.610	\$88.110
Potential rescission	•	33.300	•

Appropriation

Other Procurement, Navy

**Command, Control, and
 Communications
 Countermeasures Support
 Equipment**

The Command, Control, and Communications Countermeasures Support Equipment line item includes funds for various equipment, devices, and subsystems and systems that provide capabilities to degrade the effectiveness of enemy weapons by performing countermeasure functions against command, control, and communications and weapons targeting systems.

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The Navy's fiscal year 1993 funds provided for AN/SLQ-49 inflatable decoys, passive countermeasures, MK-166 launchers, production engineering, and equipment installation.

The Navy's fiscal year 1994 budget request of about \$18.2 million is to buy additional decoys, passive countermeasures, and launchers.

Results of Analysis

The Congress can rescind about \$4.5 million from the Navy's fiscal year 1993 funds for command, control, and communications countermeasures because this amount is excess to program requirements. These funds have been placed on reserve for possible reprogramming action by the Chief of Naval Operations.

Navy program officials acknowledged that the approximately \$4.5 million is in excess of program requirements.

Table II.12: Command, Control, and Communications Countermeasures Support Equipment Funding/Request and Potential Rescission

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
74	\$29.735	\$14.821	\$18.172
Potential rescission	•	4.541	•

Appropriation

Other Procurement, Navy

**AN/WLQ-4(V)
Improvements**

The AN/WLQ-4(V) Improvements program provides for the procurement of modification kits, upgrades, and equipment for submarine electronic surveillance measures systems and equipment and electronic units for the configuration control model.

The Navy's \$16 million in fiscal year 1993 funds for AN/WLQ-4(V) improvements included about \$2.3 million for modification kits and about \$13.7 million for a configuration control model.

Results of Analysis

The Congress can rescind about \$3.8 million of the Navy's fiscal year 1993 funds for AN/WLQ-4(V) improvements because the funds are not needed for the purpose provided. About \$9.9 million was reprogrammed, and only

about \$2.3 million of the remaining funds is needed to execute the fiscal year 1993 program.

Program officials said that the Navy reprogrammed and transferred \$9.9 million to a field activity in December 1992. They also said that only \$2.3 million, the amount for the AN/WLQ-4(V) modification kits, upgrades, and equipment, is needed to execute the fiscal year 1993 program. Additionally, they told us that the Navy did not request fiscal year 1994 funds for the configuration control model because the need for it was eliminated.

The Navy Comptroller has placed the excess \$3.8 million on hold. Navy Comptroller officials told us that the Navy wants to use the excess for ship cost adjustments.

**Table II.13: AN/WLQ-4(V)
 Improvements Program Funding and
 Potential Rescission**

Budget line	Fiscal year		
	1992	1993	1994
80	\$1.958	\$16.007	•
Potential rescission	•	3.810	•

Appropriation

Other Procurement, Navy

**Link 16 Joint Tactical
 Information Distribution
 System**

The Link 16 Joint Tactical Information Distribution System line item provides funds to buy terminals and command and control processors for use on the joint service Link 16 communications net.

For fiscal year 1992, Link 16 funds of about \$35.7 million included about \$25.4 million for 10 terminals and about \$8.8 million for 10 processors. The approximately \$3.6 million remaining is for production and training support and equipment installation.

For fiscal year 1993, funds of about \$39.7 million included about \$22.7 million for 10 terminals and about \$8.8 million for 10 processors. The approximately \$8.2 million remaining is for production and equipment installation.

The Navy's fiscal year 1994 budget request of about \$24 million includes about \$16.2 million for six ship terminals, about \$4.6 million for five

processors, and approximately \$3.3 million for production and training support and equipment installation.

Results of Analysis

The Congress can deny the Navy's fiscal year 1994 request of \$24 million and rescind about \$46 million in fiscal year 1992 and 1993 funds because the terminals are still not expected to be ready for production until fiscal year 1995.

Our November 1992 report on military communications suggested that the congressional authorizing and appropriation committees for defense appropriations consider prohibiting DOD from awarding additional terminal contracts and denying future procurement requests until (1) operational testing and evaluation demonstrates that the system meets its performance requirements and (2) DOD rejustifies the system through a cost and operational effectiveness analysis of alternatives.³

The Commander, Navy Operational Test and Evaluation Force, published the results of the operational test on the terminals in January 1993. The report on the test states that the Commander could not attest to the potential operational effectiveness and operational suitability of the terminals.

Program officials told us that the February 1994 Defense Acquisition Board's Milestone IIIB review of full-rate procurement for the terminal had been rescheduled for February 1995. They also said that the earlier Board's decision approved limited rate production of the terminal quantities through the fiscal year 1993 budget and that the delay for the full-rate production decision has no impact on the obligation of fiscal years 1992 and 1993 funding. In addition, they said that a denial of the fiscal year 1994 budget request will result in the loss of six shipboard terminals and will increase the unit cost on remaining terminals for aircraft and ships.

Further procurement of the terminals until tests can demonstrate that the terminals are operationally effective and suitable is premature and can result in additional costs being incurred.

³Military Communications: Joint Tactical Information Distribution System Issues (GAO/NSIAD-93-16, Nov. 12, 1992).

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Table II.14: Link 16 Joint Tactical Information Distribution System Funding/Request and Potential Reduction and Rescissions

Budget line	Fiscal year		
	1992	1993	1994
	Dollars in millions		
85	\$35.738	\$39.760	\$24.021
Potential reduction	•	•	24.000
Potential rescissions	8.792	37.210	•

Appropriation

Other Procurement, Navy

AEGIS Support Equipment

The AEGIS Support Equipment funds are used to buy equipment for shore facilities and for AEGIS cruisers and destroyers. The \$107.8 million in fiscal year 1993 funds included \$5 million for the AN/UYH-16 mass memory storage device for the Navy's UYK-44 computer system. The Navy is requesting \$29.6 million for fiscal year 1994 for AEGIS Support Equipment.

Results of Analysis

Unless the Congress remains convinced that the funds should be expended for the AN/UYH-16, it can rescind \$5 million of the Navy's fiscal year 1993 unobligated funds because the Navy considers the funds excess to program requirements.

Navy program officials said that the AN/UYH-16 for which the funds were provided is not needed and that the funds are excess to program requirements.

Table II.15: AEGIS Support Equipment Funding/Request and Potential Rescission

Budget line	Fiscal year		
	1992	1993	1994
Dollars in millions			
174	\$42.500	\$107.800	\$29.600
Potential rescission	•	5.000	•

Potential Reductions, Rescissions, and Restrictions to Air Force Procurement Programs

We identified about \$1,658.8 million in potential reductions in the Air Force's fiscal year 1994 procurement budget requests, about \$248.1 million in potential rescissions in fiscal years 1992 and 1993 funding, and \$234.4 million in potential restrictions to the Air Force's obligational authority for fiscal year 1994 procurement budget requests. The following section provides a brief description of our analysis and proposed actions. Table III.1 summarizes the proposed actions.

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Table III.1: Summary of Potential Reductions, Rescissions, and Restrictions to Air Force Programs

Dollars in millions

Program	Potential fiscal year 1994 reductions	Potential prior year rescissions	Potential restrictions	See page
Aircraft Procurement				
Navstar Global Positioning System	•	•	\$92.100	50
Modification of in-service aircraft	•	\$77.026	•	52
F-16 Aircraft	\$511.000	67.700	•	54
C-17 Aircraft	600.700	•	•	56
T-1A Tanker-Transport Training System	6.600	•	•	57
E-8B advance procurement	61.850	•	•	58
F-15 (ALQ-135 Jammer)	•	•	142.300	60
C-135 modification	•	3.900	•	61
C-17 spares & repair parts	59.969	•	•	62
Common Aerospace Ground Equipment	16.040	10.653	•	65
War consumables	28.523	•	•	66
Other production charges	0.859	•	•	66
Subtotal	1,285.541	159.279	234.400	
Missile Procurement				
Advanced Cruise Missile	54.400	85.025	•	68
Tri-Service Standoff Attack Missile Program	195.900	•	•	69
Advanced Medium Range Air-to-Air Missile	52.300	•	•	71
AGM-130	3.500	•	•	71
Advanced Medium Range Air-to-Air Missile spares and repair parts	2.700	•	•	72
Atlas II/Small and Medium Launch Program Office	•	2.100	•	73
Defense Support Program	41.300	•	•	74
Defense Satellite Communications System	3.100	1.700	•	76
Subtotal	353.200	88.825	•	
Other Procurement				
Military Satellite Communications Program	17.197	•	•	77
Space Modifications	2.900	•	•	78
Subtotal	20.097	•	•	
Total	\$1,658.838	\$248.104	\$234.400	

Appropriation

Aircraft Procurement, Air Force

Navstar Global Positioning System

The Navstar Global Positioning System is a space-based radio navigation system designed to provide precise three-dimensional position, velocity, and time data for land, sea, and air users. The system consists of (1) a 24-satellite constellation, including three on-orbit spares; (2) a control segment; and (3) a user receiver segment.

The user receiver segment consists of hardware devices that receive data transmitted by the satellites and derive navigation and time information for local use. The receivers are being installed on land, sea, and air vehicles. In fiscal year 1994, the Air Force requested a total of \$92.1 million for receivers to be installed on specific aircraft systems.

Results of Analysis

The Congress can restrict the Air Force's obligational authority for fiscal year 1994 aircraft procurement funds of \$92.1 million for the Navstar Global Positioning System until controls are established to ensure that the funds are used to acquire global positioning system equipment. The Air Force is not adequately controlling the obligation and the application of funds that are intended to procure user receiver equipment for various military aircraft.

The program office has reported historically poor funding obligation/execution rates for the receiver aircraft modifications. For example, the program director reported that first year aircraft modification obligation rates typically ranged between 2 percent to 39 percent, compared to an Office of the Secretary of Defense goal of 65 percent.

Air Force officials were aware of instances where program funds were used to acquire equipment that was not for the global positioning system. However, they could not quantify the associated dollar amount. Program officials and documents stated that this divergence of funds has led to a stretch-out of the modification effort, which "severely" limits the use of satellite capability and availability.

During a 6-month trial period, the Air Force attempted to establish visibility over the use of user equipment funds by the numerous weapon system program offices expending Navstar Global Positioning System funds. From this period, the program office identified several alternatives

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to better control receiver funds. The Air Force has selected an alternative, which is awaiting final Air Force approval.

The amount of proposed restrictions for the individual line items below represents the Navstar Global Positioning System receiver portion of the total line item request.

Table III.2: Navstar Global Positioning System Funding/Request and Potential Restrictions

Budget line	Dollars in millions		
	Fiscal year		
	1992	1993	1994
23 (B-52)	\$45.200	\$64.100	\$47.400
Potential restriction	•	•	11.200
25 (A-10)	20.800	4.000	28.400
Potential restriction	•	•	8.500
27 (F-15)	295.900	301.300	282.700
Potential restriction	•	•	18.700
30 (F-111)	80.700	38.300	19.100
Potential restriction	•	•	7.500
32 (C-5)	40.700	8.200	31.100
Potential restriction	•	•	6.500
33 (C-9)	1.400	2.000	8.500
Potential restriction	•	•	6.800
42 (KC-10A)	11.900	17.600	36.700
Potential restriction	•	•	11.000
47 (C-130)	84.700	66.100	141.100
Potential restriction	•	•	9.900
50 (E-4)	6.400	17.800	31.500
Potential restriction	•	•	9.000
52 (H-60)	0.600	•	29.600
Potential restriction	•	•	3.000
Total	•	•	\$92.100

Appropriation

Aircraft Procurement, Air Force

Modification of In-Service Aircraft

The Air Force annually requests funds to modify its aircraft in order to modernize, increase capability, and extend the life of its aircraft.

Results of Analysis

The Congress can rescind \$77 million from the Air Force's prior year funds for aircraft modifications—\$10.4 million from fiscal year 1993 and about \$66.7 million from fiscal year 1992. The funds, planned for installation of modifications, can be rescinded because they are expected to expire before they can be used for the purpose intended.

Since fiscal year 1991, the funds used to install modification kits were budgeted in the same year the kits were procured. Production lead time for these kits, however, frequently exceeded the 3-year life of the appropriation and, as a result, funding would expire before installations could occur. Air Force officials stated that, if the Air Force followed its normal practice, funds expected to expire would be obligated to the depot maintenance industrial fund. This practice adds to the Air Force's increasing balance of funded carryover maintenance work and results in more funds in a carryover status than is prudent.

For the fiscal year 1994 budget, the Office of the Secretary of Defense directed the Air Force to change its funding policy by budgeting for installations in the year they will occur. We agree that installation of modifications are more appropriately funded in the year they occur.

The Air Force estimated that the fiscal years 1992 and 1993 funding for installation of modification kits would expire before the kits were to be installed. DOD officials stated that funds to install the modifications must be included in fiscal years 1995 and beyond, as appropriate.

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**Table III.3: Modification of In-Service
Aircraft Funding/Requests and
Potential Rescissions**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
22 (B-1B)	\$97.900	\$45.400	\$50.800
Potential rescission	11.200	•	•
23 (B-52)	45.200	64.100	47.400
Potential rescission	0.526	0.100	•
27 (F-15)	295.900	301.300	282.700
Potential rescission	8.650	3.800	•
28 (F-16)	228.100	168.000	120.500
Potential rescission	0.600	0.200	•
30 (F-111)	80.700	38.300	19.100
Potential rescission	2.600	2.800	•
39 (T-38)	39.400	30.300	12.900
Potential rescission	24.550	•	•
48 (C-135)	570.300	522.200	46.600
Potential rescission	18.500	3.500	•
Total	\$66.626	\$10.400	•

Appropriation

Aircraft Procurement, Air Force

F-16 Aircraft

The F-16 fighter is a single engine, lightweight, high performance aircraft that is capable of delivering both air-to-air and air-to-surface weapons in performing a broad range of tactical air warfare missions. The F-16 is used by the air forces of 17 nations.

The Air Force requested \$724.7 million in fiscal year 1994 for procurement of 24 F-16s, support equipment, and other costs, and \$70.8 million for advance procurement of another 24 aircraft that DOD planned to procure in fiscal year 1995. For fiscal year 1993, \$608.8 million was provided for F-16 procurement and \$67.7 million for advance procurement related to fiscal year 1994 procurement of F-16s.

Results of Analysis

The Congress can reduce the fiscal year 1994 budget request by \$440.2 million and rescind \$67.7 million in fiscal year 1993 funds for advance procurement because procurement of additional F-16s is not needed to support the downsized force of 20 Air Force wings and because

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the future force mix of tactical aircraft is still being evaluated. Further, \$70.8 million included in the fiscal year 1994 request for advance procurement can be denied because the Secretary of Defense canceled the planned procurement for fiscal year 1995.

The fiscal year 1994 budget request for 24 F-16s was intended to support an Air Force of 24.3 tactical fighter wing equivalents. However, as a result of the DOD bottom-up review, the Air Force will be downsized to 20 fighter wing equivalents. DOD is still evaluating the future tactical aircraft force mix and alternative weapon systems, which will include determining how many F-16s and which configurations will be needed to support 20 wings.

During the preparation of the fiscal year 1994 budget, the Air Force proposed terminating F-16 production with the 1993 procurement and suggested extending the service life of older F-16s as a much less expensive alternative to procuring new ones. Subsequently, the Secretary of Defense, in Program Budget Decision 750 (dated March 3, 1993), reinserted funding for 24 aircraft in both fiscal years 1994 and 1995, using as a justification the need to sustain the fighter industrial base without depending on foreign sales, rather than the need for the aircraft.

The Secretary also directed the Air Force to extend manufacturing and delivery of F-16s procured in fiscal years 1992 and 1993 to avoid a projected dip in production during 1995 and 1996 below what the Air Force believed to be a "minimum sustaining production rate" of about five aircraft per month. Subsequent to the submission of the budget to the Congress, the Secretary canceled the planned procurement of F-16s in fiscal year 1995.

However, according to Air Force schedules, maintenance of the fighter industrial base at the minimum production rate is achievable without the fiscal year 1994 procurement when current foreign sales and extension of 1992- and 1993-funded deliveries are considered. The exception is a 6-month gap between June and November 1996 when planned deliveries fall below the five per month rate. Air Force data indicate that additional smoothing of deliveries and potential new foreign sales could ameliorate this gap.

We believe that funding for the fiscal year 1994 procurement of 24 F-16s can be eliminated because (1) new F-16s are not needed to support the reduced force of 20 wings, (2) the future force mix of tactical aircraft is still under study, and (3) sustainment of the fighter industrial base is

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possible if foreign sales and additional smoothing of deliveries are considered. Funding for the advance procurement of fiscal year 1995-funded aircraft should also be eliminated since the Secretary canceled the planned procurement. The remaining fiscal year 1994 funding level of \$284.5 million—as originally proposed by the Air Force—would be sufficient to acquire support equipment and meet logistics requirements for aircraft previously approved for procurement.

Air Force officials said that procuring new F-16s in the most recent (Block 50) configuration would provide improved precision strike capability. However, they agreed that the quantity and configuration of F-16s needed could change pending the outcome of the force mix study and decisions made on alternative future systems. The Air Force will have 229 F-16s of the most recent Block 50 configuration, and it is questionable whether more would be needed to support 20 wings in whatever future force mix is proposed.

Air Force officials also advised us that not funding the F-16 production program for fiscal year 1994 will increase costs of F-16s already ordered but not delivered, F-22 overhead costs, costs to foreign military sales customers, and program close-out costs. We did not evaluate the validity of these increased costs but did note that (1) officials identified total increased costs of \$740 million, which exceeds the fiscal year 1994 request for 24 F-16s and (2) the Air Force, in its original budget proposal to the Secretary, identified significant cost savings across the 5-year defense plan by not buying more F-16s and instead extending the service life of older aircraft.

**Table III.4: F-16 Aircraft
Funding/Request and Potential
Reductions and Rescission**

Budget line	Fiscal year		
	1992	1993	1994
5	\$1,072.700	\$608.800	\$724.700
Potential reduction	•	•	440.200
6	78.100	67.700	70.800
Potential reduction	•	•	70.800
Potential rescission	•	67.700	•

Appropriation

Aircraft Procurement, Air Force

C-17 Aircraft

The C-17 military transport aircraft is designed to airlift substantial payloads over long ranges and to carry the full range of military cargo directly into small, austere airfields. The Air Force plans to purchase 120 production aircraft at an estimated cost of \$39.5 billion.

The C-17 program entered low-rate initial production in January 1989. The Air Force has planned a full-rate production decision for July 1995. The Air Force requested \$2,072.8 million in fiscal year 1994 aircraft procurement funds and training and depot support for the C-17 program.

Results of Analysis

The Air Force's fiscal year 1994 C-17 aircraft procurement request can be reduced by a total of \$600.7 million—\$545.6 million for two aircraft because C-17 program concurrency between production and testing has increased and \$55.1 million because slips in delivery dates have delayed the need for certain training components and the establishment of C-17 depot capability.

Airframe

The Congress can reduce \$545.6 million from the C-17 program request because delays in the flight test program, coupled with accelerated assembly start dates, have resulted in increased concurrency in the C-17 program. Increasing production when testing is ongoing increases the amount of concurrency and therefore program risk, especially in a program with known problems. The Congress can reduce the fiscal year 1994 budget request and, at the same time, the degree of concurrency in the C-17 program by rolling over the procurement of two C-17 aircraft to fiscal year 1995.

C-17 program office officials do not agree that program concurrency has increased. They contend that, according to their financial model, which takes into consideration fixed costs associated with production facilities, decreasing the fiscal year 1994 aircraft buy from six to four would reduce C-17 fiscal year 1994 program funding by only \$325 million.

Concurrency increased because the production schedule for the last two aircraft (P-25 and P-26) to be procured with fiscal year 1994 funds was accelerated from the original program office estimated assembly start dates in fiscal year 1995 to August and October 1994. With the new accelerated production schedule, the last of the six aircraft to be acquired

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with fiscal year 1994 funds is currently scheduled to start assembly in early fiscal year 1995. We calculated the potential reduction of \$545.6 million by subtracting previously appropriated advance procurement funds from the Air Force C-17 fly-away costs by unit.

Support

The Air Force's fiscal year 1994 aircraft procurement request includes \$28.6 million for a C-17 aircrew training system. Delays in the C-17 aircraft delivery schedule that were formalized after the fiscal year 1994 budget data were submitted, however, have delayed the need for this system until fiscal year 1998. As a result, funds to procure this system will not be needed until fiscal year 1995.

In addition, the Air Force does not need \$26.5 million in fiscal year 1994 funds to accelerate C-17 depot capability as requested because aircraft deliveries have slowed. Program officials believe accelerating C-17 depot capability will reduce interim contractor support costs in later years. However, the Air Force has not performed a comparison of the potential benefits and costs to support this acceleration. Procurement of support and automated test equipment for depots before the aircraft is fully tested, and design changes based on test results are finalized, increases the risk of redesign and retrofit.

**Table III.5: C-17 Aircraft
Funding/Request and Potential
Reductions**

Dollars in millions			
Budget line	Fiscal year		
	1992	1993	1994
9	\$1,523.800	\$1,788.800	\$2,072.800
Potential reductions			
Airframe	•	•	545.600
Support	•	•	55.100
Total	•	•	\$600.700

Appropriation

Aircraft Procurement, Air Force

**T-1A Tanker-Transport
Training System**

The T-1A Tanker-Transport Training System is being acquired for advanced training of pilots entering the airlift-tanker career track. The T-1A is a modified commercial jet aircraft that accommodates an instructor and two students. It will decrease the use of the current aging trainer (the T-38) and is expected to reduce operating and support costs. The Air Force has bought 113 T-1As of a planned 180. The ground-based

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training system for the T-1A includes simulators, courseware and materials, and other instructional devices. The Air Force is requesting \$147.4 million in fiscal year 1994 to buy 35 additional T-1As, 1 simulator, and other support items. The amount included in the request for the simulator is \$6.6 million.

Results of Analysis

The Air Force's fiscal year 1994 request for the T-1A program can be reduced by \$6.6 million because the Air Force can use unobligated funds from prior years to procure the simulator. In addition, the Air Force has not fully defined its total requirements for simulators and other training devices.

The program office currently has unobligated funds from fiscal years 1992 and 1993 totaling about \$16.7 million. The Air Force does not have firm requirements for the use of these funds. The Air Force can use unobligated funds from either fiscal year 1992 or 1993 to procure the simulator requested in fiscal year 1994, and the Congress can, thereby, reduce the fiscal year 1994 request by \$6.6 million.

The Air Force has already bought seven of the nine simulators programmed. The Air Training Command is reconsidering the total requirement amid changes in force structure, basing plans, and training work load. The Command will decide whether to acquire additional simulators or some type of computer-aided instruction device. This effort is expected to be completed in November 1993.

Air Force officials agreed that they can acquire the simulator with available funds from prior years.

**Table III.6: T-1A Tanker-Transport
Training System Funding/Request and
Potential Reduction**

Budget line	Fiscal year		
	1992	1993	1994
	15	\$156.100	\$157.000
Potential reduction	•	•	6.600

Appropriation

Aircraft Procurement, Air Force

**E-8B Advance
Procurement**

The E-8B aircraft is the airborne segment of the Joint Surveillance Target Attack Radar System, which is designed to detect and track moving and

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stationary enemy armor, vehicles, and troops over a wide area. It also provides targeting information to attack aircraft pilots, artillery batteries, and standoff missile units. The system is comprised of airborne and ground segments. It is a joint Air Force and Army program with the Air Force as the lead service. The Air Force requested \$123.7 million in fiscal year 1994 for its advance procurement part of the program.

In May 1993, the Defense Acquisition Board approved low-rate initial production of five systems. The Air Force received advance procurement funding for the first two systems in fiscal year 1992; funding for the third and fourth systems was received in fiscal year 1993. The Air Force has requested advance procurement funding for the fifth and sixth systems in fiscal year 1994. The sixth system would be a full-rate production system.

Results of Analysis

The Air Force's fiscal year 1994 request can be reduced by about \$61.9 million because the Air Force requested funds for advance procurement of two aircraft, but only one is needed to complete advance procurement of the air segment's low-rate initial production quantity. Advance procurement funds for the second aircraft can be delayed until fiscal year 1995 and still meet the Air Force's planned full-rate production start date of fiscal year 1996.

According to the Air Force's production schedule, advance procurement funds for the sixth aircraft will not be needed until fiscal year 1995. Program office officials agree that deferring the advance buy for the sixth aircraft is consistent with the May 1993 Defense Acquisition Board guidance for the program. The full-rate production decision planned for September 1995 has been changed to June 1996, and the advance procurement contract award for the sixth aircraft is now scheduled for January 1995.

Table III.7: E-8B Advance Procurement Funding/Request and Potential Reduction

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
19	•	\$78.300	\$123.700
Potential reduction	•	•	61.850

Appropriation

Aircraft Procurement, Air Force

F-15 (ALQ-135 Jammer)

The ALQ-135, an internally mounted jammer in the Air Force F-15 aircraft, is intended to provide protection by deceiving enemy radars. The original ALQ-135 is a two-band system. The band designations refer to the portion of the frequency range covered. The ALQ-135 is being upgraded to provide additional frequency coverage, referred to as Band 3, for F-15C and F-15E aircraft.

The Air Force began procuring Band 3 systems in 1986 on the basis of urgent need. Operational testing has been delayed from January 1992 to November 1993. For fiscal year 1994, the Air Force requested \$142.3 million to acquire 60 more Band 3 systems under low-rate initial production.

Results of Analysis

The Air Force's fiscal year 1994 request of \$282.7 million under the F-15 aircraft modifications line item contains \$142.3 million to procure 60 additional ALQ-135 Band 3 systems before operational testing is completed. The Congress can restrict the Air Force's obligational authority for these funds until Band 3 operational testing has been successfully completed.

The Air Force has procured 331 Band 3 systems, a little over 64 percent of the planned buy of 514 units, under low-rate initial production. The Air Force's fiscal year 1994 request is to procure 60 additional units, which are to be on contract in December 1993. However, the Band 3 system is not scheduled to begin operational testing until November 1993 and is not expected to complete testing until April 1994. Thus, about 76 percent of the planned procurement could be made before testing has successfully demonstrated that the system meets requirements. Further, the test program has suffered many delays, and there is no assurance that the operational testing will be completed on schedule.

According to the Air Force, restricting the obligation authority for the fiscal year 1994 funds until operational testing is successfully completed could cause a production break and delay deployment of the Band 3 system on some F-15C aircraft. The Air Force estimates a 2- to 14-month delay could increase costs from \$20 million to \$89 million. However, our review indicates that the program has encountered significant software design problems, which have delayed completion of development testing

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by about 2 years, and slippages are still occurring. Thus, the Air Force has placed at risk two-thirds of the planned buy and the additional contract award would increase the investment at risk.

**Table III.8: F-15
(ALQ-135) Funding/Request and
Potential Restriction**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
27	\$295.900	\$301.300	\$282.700
Potential restriction	•	•	142.300

Appropriation

Aircraft Procurement, Air Force

C-135 Modification

The C-135 aircraft provide aerial refueling, cargo, passenger, and reconnaissance mission support. The tanker versions are designated as KC-135. Some of the aging KC-135 aircraft are being upgraded through modification programs (e.g., KC-135R Re-engine Program), and others are being retired. The Air Force plans to upgrade the auxiliary power unit on all 161 KC-135E Air National Guard and Air Force Reserve aircraft to the KC-135R configuration. The Air Force requested \$46.6 million in fiscal year 1994 for C-135 modifications.

Results of Analysis

The Congress can rescind \$3.9 million from the Air Force's fiscal year 1993 funds of \$522.2 million for C-135 modifications because the Air Force double-counted some modification requirements in fiscal year 1993.

The Air Force had planned to use \$26.4 million in fiscal year 1993 to procure 67 auxiliary power units. Funds were also provided that year to modify 10 KC-135E aircraft to the KC-135R configuration. This modification replaces the engines and many other systems, including the auxiliary power unit. As a result, the net requirement for new power units was reduced to 57 (67 planned less 10 included in the modification program) at an estimated cost of \$22.5 million. Therefore, \$3.9 million in fiscal year 1993 funding is not needed to procure the units. Air Force officials agreed that the \$3.9 million is not needed to procure auxiliary power units.

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**Table III.9: C-135 Funding/Request and
Potential Rescission**

Dollars in millions			
Budget line	Fiscal year		
	1992	1993	1994
48	\$570.300	\$522.200	\$46.600
Potential rescission	•	3.900	•

Appropriation

Aircraft Procurement, Air Force

**C-17 Spares and Repair
Parts**

The C-17 military transport aircraft is designed to airlift substantial payloads over long ranges and to carry the full range of military cargo directly into small, austere airfields. The Air Force plans to purchase 120 production aircraft at an estimated cost of \$39.5 billion.

The Air Force's fiscal year 1994 spares and repair parts budget request of approximately \$556.1 million includes about \$60 million to increase the number of C-17 spare parts in inventory.

Results of Analysis

The Air Force's fiscal year 1994 request for aircraft spares and repair parts can be reduced by approximately \$60 million for C-17 spare parts. The contractor and the Air Force have sufficient C-17 spare parts to last at least until late 1995.

Based on Air Force revised delivery dates, the initial 16 C-17 aircraft will be delivered to the first operating base between June 1993 and April 1996.

The C-17 contract requires the contractor to provide interim support to the 16 aircraft based on 90 flying hours a month per plane for the first year after the aircraft are delivered. The contractor already has acquired parts to provide interim support for the 16 aircraft. Any parts not used will be turned over to the Air Force.

The Air Force will take delivery of 2 C-17 aircraft at the first operating base in fiscal year 1993 and the remainder of the first 16 aircraft in fiscal years 1994, 1995, and 1996. Based on calculations using the Air Force delivery schedule and an operation profile of 90 flying hours a month per aircraft, we estimate that the Air Force has sufficient parts on order to last until August or September 1995. The Air Force has already ordered

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\$111.7 million in spares and will take possession of any spares not used by the contractor.

In addition, supplies on hand and on order are likely to be sufficient for a longer period because the Air Force based its spare parts requirement on a flight profile that is greater than that of other airlift aircraft. During the Somalia assistance operation, the C-5 and C-141 averaged about 81.7 and 88.5 hours a month, respectively. Moreover, in September 1992 we reported that the C-5 and C-141 had averaged even fewer flying hours per month, 49.6 and 74.7, respectively, during an 8-month period.¹

Continuing to order spare parts before achieving program stability increases the risk of parts obsolescence. For example, some C-17 spare parts that the Air Force ordered earlier are now obsolete. Consequently, the Air Force has canceled 357 orders worth \$39.6 million that are no longer required.

**Table III.10: C-17 Spares and Repair
Parts Funding/Request and Potential
Reduction**

Budget line	Fiscal year		
	1992	1993	1994
55	\$589.000	\$495.700	\$556.077
Potential reduction	•	•	59.969

Appropriation

Aircraft Procurement, Air Force

**Common Aerospace
Ground Equipment**

The Common Aerospace Ground Equipment program provides aircraft support equipment that is common to more than one weapon system. For fiscal year 1994, the Air Force requested approximately \$193.5 million for common support equipment, including the Multichip Modules Depot Equipment, common support equipment for the B-2, Air Transportable Galley-Lavatory, the Avionics Integrated Support Facilities, and the F-15 Downsized Tester.

The F-15 Downsized Tester includes electronic hardware components (tester) and the test program sets (software) needed to test and repair F-15 subsystems. It will replace the aging F-15 Avionics Intermediate Shop and is expected to be more transportable and more reliable.

¹1993 Aircraft Budget: Potential Reductions for the C-17 Initial Spares (GAO/NSIAD-92-293, Sept. 18, 1992).

Results of Analysis

The Congress can reduce the Air Force's fiscal year 1994 budget request for common support equipment by about \$16 million and rescind about \$10.7 million in fiscal year 1993 funding. The specific items are discussed below.

**Multichip Modules Depot
Equipment**

New weapon systems demand increased performance of subsystems incorporating state-of-the-art electronics. Circuit designs using multichip modules are being introduced to meet higher performance requirements. The Air Force fiscal year 1994 budget request includes approximately \$7.5 million for testers, avionics design equipment, and assembly equipment to acquire an organic depot capability to prototype, test, and repair multichip modules.

Based on the results of a study completed in June 1993 by an expert panel, Air Force Materiel Command officials stated that this multichip module depot equipment is not needed at this time. The panel concluded that there was no demonstrated requirement for the equipment. Accordingly, the fiscal year 1994 budget request can be reduced by about \$7.5 million.

**B-2 Common Support
Equipment**

The Air Force is requesting about \$9.7 million in fiscal year 1994 for B-2 common support equipment. This additional equipment will provide organizational and depot level common support that is necessary because of the addition of B-2s to the active forces. Since the fiscal year 1994 request was formulated, the Air Force decreased its B-2 common support equipment requirements by about \$4 million. Therefore, the fiscal year 1994 budget request can be reduced by about \$4 million.

**Air Transportable
Galley-Lavatory**

The Air Transportable Galley-Lavatory program provides the C-141, C-5, and C-17 aircraft with portable and interchangeable galley-lavatory units for use during troop movements, aeromedical evacuations, and special airlift missions. Each galley-lavatory unit includes two ovens, beverage dispensers, three refrigerators, a sink, two latrines, and miscellaneous equipment. In the fiscal year 1994 budget, the Air Force requested approximately \$16.9 million for 78 units (unit cost of about \$0.2 million) to support C-5 and C-141 aircraft.

Since the fiscal year 1994 budget was formulated, the Air Force decreased C-141 galley-lavatory unit requirements by 13 units. As a result of this decrease, the request can be reduced by approximately \$2.8 million.

**Avionics Integrated Support
Facilities**

Avionics Integrated Support Facilities are located at each of the Air Force Materiel Command's air logistics centers and provide a laboratory

environment to simulate flight conditions for mission essential changes to software for a weapon system's onboard computers and subsystems. This permits in-house support of operational flight programs. Funds are used to modernize and technically update equipment as weapon system changes occur.

Air Force Materiel Command staff recently reassessed this program and eliminated fiscal year 1994 requirements at one air logistics center. As a result, the fiscal year 1994 common support equipment budget request can be reduced by \$1.7 million. Air Force officials agreed that this funding is no longer needed for this purpose.

F-15 Downsized Tester

The Congress can rescind about \$10.7 million of the Air Force's fiscal year 1993 funding for the F-15 tester. A program official said that only one-half of the planned fiscal year 1993 tester buy is required to support testing and software development efforts. Procurement of additional testers can be postponed to later years when they will be needed.

The Air Force wants to procure 21 testers (5 with fiscal year 1992 funds and 16 with fiscal year 1993 funds) to support initial efforts to develop the software and to begin operations. These procurement funds have been withheld by the Office of the Secretary of Defense pending completion of a DOD Inspector General report on the tester and resolution of differences. The Air Force, the Office of the Secretary of Defense, and the Inspector General have disagreed on the tester acquisition strategy and the potential for using standardized equipment. Program officials expect the funds to be released soon and plan to begin a 4-year development, integration, and testing effort with full operational capability in late 1997.

A program official stated that only eight of the testers to be procured using fiscal year 1993 funds are needed for the software development effort. To avoid concurrent software development with procurement of the other testers, the acquisition of additional testers could be delayed until the software is developed and integrated. Consequently, eight testers costing approximately \$10.7 million in fiscal year 1993 funds can be eliminated.

Air Force officials said cutting eight testers from the fiscal year 1993 procurement would cause a production break and would increase the cost of later tester procurement. We doubt whether a break would occur given the program schedules and delivery times shown in the budget request. Scheduled deliveries of the testers to be procured using fiscal year 1993 funds will not be completed until at least August 1995. The Air Force then

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plans to make the next procurement of testers using fiscal year 1995 funds and, with an expected 10-month lead time, these deliveries could begin at the completion of the deliveries for the fiscal year 1993 procurement.

**Table III.11: Common Aerospace
Ground Equipment Funding/Request
and Potential Reductions and
Rescission**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
56	\$330.205	\$439.652	\$193.535
Potential reductions			
Multichip Module Depot Equipment	•	•	7.520
B-2 Common Support	•	•	4.010
Air Transportable Galley-Lavatory	•	•	2.810
Avionics Integrated Support Facilities	•	•	1.700
Total	•	•	\$16.040
Potential rescission			
F-15 Downsized Tester	•	10.653	•
Total	•	\$10.653	•

Appropriation

Aircraft Procurement, Air Force

War Consumables

The Air Force request for war consumables includes the request for missile launchers for the Advanced Medium Range Air-to-Air Missile (AMRAAM) and Sidewinder missile. These launchers deploy the missiles from the Air Force F-15 and F-16 (models LAU-128 and LAU-129) and the Navy F-14 and F/A-18 (LAU-127). The launchers also will be used on the Air Force F-22 (LAU-128).

Results of Analysis

The Air Force's fiscal year 1994 budget request of approximately \$31.9 million for war consumables can be reduced by about \$28.5 million because the missile launcher procurement can be delayed until fiscal year 1995. According to AMRAAM contracting officials, the Air Force will not award the fiscal year 1993 procurement until fiscal year 1994, and the denial of the fiscal year 1994 request will not negatively impact launcher production.

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**Table III.12: War Consumables
Funding/Request and Potential
Reduction**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
58	\$25.441	\$27.757	\$31.906
Potential reduction	•	•	28.523

Appropriation

Aircraft Procurement, Air Force

Other Production Charges

The Air Force's request for other production charges includes some AGM-130 improved data link costs. The airborne data link is designed to provide the aircraft with the standoff capability to guide the AGM-130. The improved data link is expected to be more reliable and jam-resistant.

Results of Analysis

The Air Force's fiscal year 1994 request of approximately \$670.2 million for other production charges can be reduced by about \$0.9 million based on more recent estimates. The request includes \$12.3 million for this item; however, AGM-130 program officials now estimate that fiscal year 1994 improved data link procurement costs will be \$11.5 million, or about \$0.9 million less than requested.

The AGM-130 program officials believe the \$0.9 million is needed for other requirements. These officials plan to use these excess funds, along with other excess AGM-130 funds, for (1) an interface control working group, (2) more missiles, (3) replenishment of contingencies for engineering change orders, and (4) initial spares. According to the officials, these requirements were known before the budget submission but were not of sufficient priority to include in the request.

**Table III.13: Other Production Charges
(AGM-130 Data Link) Funding/Request
and Potential Reduction**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
59	\$518.673	\$595.000	\$670.242
Potential reduction	•	•	0.859

Appropriation

Missile Procurement, Air Force

Advanced Cruise Missile

The Advanced Cruise Missile is a subsonic, turbo-fan powered missile equipped with a nuclear warhead. The missile is designed to be less detectable and have greater range, accuracy, and operational flexibility than the Air Launched Cruise Missile. The Air Force began developing the Advanced Cruise Missile in 1982 and has experienced significant development and production problems, leading to cost growth and schedule delays. In 1992 the President canceled further Advanced Cruise Missile production. Deliveries of the last 460 missiles were completed in August 1993. The Air Force has requested \$59.4 million in fiscal year 1994 to (1) acquire test kits for operational flight testing, (2) continue contractor-provided weapon system support, and (3) fund other efforts such as support equipment procurement and management support.

Results of Analysis

The Congress can reduce the Air Force's fiscal year 1994 missile procurement request of \$59.4 million for the Advanced Cruise Missile program by \$54.4 million. This reduction is possible because (1) acquisition of test kits can be deferred (\$30 million); (2) contractor-provided weapon system support should be funded from the operations and maintenance appropriation (\$23 million); and (3) the Air Force has reduced the estimated cost of other efforts, such as support equipment procurement (\$1.4 million). In addition, about \$77.6 million in fiscal year 1993 funds can be rescinded because program shutdown costs are much lower than previously expected. Also, about \$2.7 million of the fiscal year 1992 missile procurement funds has not been used, exceeds identified program requirements, and can be rescinded. Further, about \$4.6 million in fiscal year 1993 missile modification funds can be rescinded because they are not needed by the program.

Missile Procurement

Our analysis of the fiscal year 1994 Advanced Cruise Missile request indicates that \$30 million for proposed procurement of missile test kits can be deferred to fiscal year 1995 because the Air Force has sufficient quantities of the kits in the inventory or on order to meet requirements through the end of 1998. Program officials stated their requirements for contractor weapon system support have been reduced from \$23 million to \$15 million and should be funded from the operations and maintenance appropriation because Advanced Cruise Missile production is complete. To resolve this issue, the Air Force has requested that the Congress provide statutory language to allow use of excess prior year Advanced

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Cruise Missile procurement funds for weapon system support. The Air Force has also reduced its estimate of the funds needed in fiscal year 1994 for other activities by \$1.4 million, from \$6.4 million to \$5 million.

In fiscal year 1993, the Congress provided \$127.1 million to close out the missile's production program. Following reprogramming and other actions, \$99 million remains available for the program. The Air Force had obligated only about \$6 million of these funds as of July 1993, and it has significantly reduced its estimate of program closeout costs. Our analysis indicates that, after allowing for funds to complete ongoing or previously planned activities, about \$77.6 million is not needed for the purposes for which the funds were provided. As previously stated, the Air Force has requested statutory authority to use some of these excess funds to pay for weapon system support in subsequent years.

For fiscal year 1992, about \$2.7 million of the funds provided for the program has not been used, is not needed to complete ongoing or planned activities, and is available for rescission.

The Air Force officials agreed with these reductions.

Missile Modification

In fiscal year 1993, the Congress provided about \$4.9 million for missile modification, of which about \$4.6 million has not been used. Our analysis indicates these funds are not needed by the program. Air Force officials agreed that these funds can be rescinded.

**Table III.14: Advanced Cruise Missile
Funding/Request and Potential
Reduction and Rescissions**

Budget line	Fiscal year		
	1992	1993	1994
	Dollars in millions		
6	\$175.500	\$99.000	\$59.400
Potential reduction	•	•	54.400
Potential rescission	2.740	77.640 ^a	•
27	•	4.907	•
Potential rescission	•	4.645	•

^aIf the Congress approves the use of about \$15 million to fund fiscal year 1994 weapon system support efforts, the amount available for reduction would be \$62.6 million.

Appropriation

Missile Procurement, Air Force

**Tri-Service Standoff Attack
Missile Program**

The Tri-Service Standoff Attack Missile program is developing a family of low observable missiles to meet the Air Force, Army, and Navy requirements for a conventional standoff capability. The missile carries a 1,000-pound class submunition dispenser or a unitary 1,000-pound penetrating warhead. Targets include enemy airfields, air defense sites, and reinforced concrete structures such as command posts. The missiles are to be carried by a variety of Air Force and Navy aircraft, as well as the Army's Multiple Launch Rocket System.

The missile development program began in 1986 and has experienced development problems, cost growth, and schedule delays.

Results of Analysis

The Air Force's fiscal year 1994 request of \$195.9 million can be denied because procurement of the Tri-Service Standoff Attack Missile is premature. The Air Force has not demonstrated whether the missile will function under operational conditions. Classified details supporting deferral of initial production were provided to selected staff members, Senate and House Committees on Armed Services and on Appropriations, Subcommittees on Defense, in April 1993.

Air Force officials disagreed with the potential reduction and stated that delaying the commitment of production funds would increase program costs. However, our previous work on other weapon systems has shown that, once a production commitment is made, even though categorized as limited or low rate, production continues despite the subsequent discovery of major system problems.²

**Table III.15: Tri-Service Standoff Attack
Missile Request and Potential
Reduction**

Budget line	Fiscal year		
	1992	1993	1994
	5	•	•
Potential reduction	•	•	195.900

²Electronic Warfare: Early Production of Tacit Rainbow Missile Not Warranted (GAO/NSIAD-91-71, Mar. 8, 1991).

Appropriation

Missile Procurement, Air Force

AMRAAM

AMRAAM is an all-weather, all-environment radar-guided missile designed to improve capabilities against very low-altitude and high-altitude, high-speed targets in an electronic countermeasure environment. AMRAAM is designed to enable a pilot to simultaneously engage multiple aircraft in combat and destroy targets both within and beyond the pilot's visual range. It is to be compatible with both the Navy and the Air Force's fighter aircraft: the F-14, F-5, F-16, and F/A-18. The Air Force also expects to use AMRAAM on the F-22.

Results of Analysis

The Air Force's fiscal year 1994 request of \$501.6 million can be reduced by \$52.3 million: (1) \$47 million by slowing missile production to allow incorporating planned improvements into as many new missiles as possible and (2) \$5.3 million by reducing the amount requested for training equipment to agree with revised estimates.

Missiles

We reported in July 1992 that the Air Force's AMRAAM procurement plans for this missile were inconsistent with the Air Combat Command's position that planned improvements should be incorporated into as many missiles as possible.³ We continue to believe that production should be slowed in order to incorporate improvements into as many missiles as possible during production. This action could reduce the costs of rework and additional testing as well as avoid the risks of potential integration problems.

The request includes funds to procure 725 tactical missiles and 24 test missiles. In addition, 230 missiles are planned for foreign military sales, and the Navy plans to buy 44 missiles—a total of 1,023 missiles for fiscal year 1994. However, the total procurement could be reduced to 900 missiles if it were limited to the minimum rate that would sustain effective competition between the two contractors. Such a procurement would delay 123 missiles until the improvements are incorporated into production. Further, according to project office estimates, it would reduce the requested amount by approximately \$47 million.

³Missile Procurement: Limit Procurement of AMRAAMs Until the Missile's Lethality Is Improved (GAO/NSIAD-92-243, July 30, 1992).

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If the services determine that the procurement could be limited to a minimum sustaining rate for each contractor,⁴ the procurement could be reduced to 720 missiles, or 303 less than the requested quantity. Such an action would reduce the request by about \$123 million.

Training Equipment

The request includes \$11.1 million for training equipment. However, according to program office estimates, only \$5.8 million will be required. Therefore, the request can be reduced by \$5.3 million.

**Table III.16: AMRAAM
Funding/Request and Potential
Reduction**

Dollars in millions			
Budget line	Fiscal year		
	1992	1993	1994
9	\$532.300	\$623.100	\$501.600
Potential reduction	•	•	52.300

Appropriation

Missile Procurement, Air Force

AGM-130

The AGM-130 is a precision-guided weapon for use by the F-111F and F-15E aircraft against heavily defended high-value targets. The weapon is designed to carry a large payload and provide sufficient standoff range to avoid air defenses.

Results of Analysis

The Air Force's fiscal year 1994 request of approximately \$73.9 million can be reduced by \$3.5 million due to more recent estimates of procurement costs and inflation rates. AGM-130 program officials estimate that fiscal year 1994 missile procurement costs will be \$70.4 million, or \$3.5 million less than the budget request.

The AGM-130 program officials believe these funds are needed for other requirements. These officials plan to use these excess funds for (1) an interface control working group, (2) more missiles, (3) replenishment of contingencies for engineering change orders, and (4) initial spares. According to the officials, these requirements were known before the budget submission but were not of sufficient priority to include in the request.

⁴The minimum sustaining rate is the least number of items that can be produced on a single shift basis and still avoid increasing the unit cost by 20 percent. The minimum monthly production rate needed to sustain each of the two contractor's operations is about 30 missiles, according to Air Force officials.

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Table III.17: AGM-130 Funding/Request and Potential Reduction

Dollars in millions			
Budget line	Fiscal year		
	1992	1993	1994
10	\$71.234	\$79.923	\$73.881
Potential reduction	•	•	3.500

Appropriation

Missile Procurement, Air Force

AMRAAM Spares and Repair Parts

The spares and repair parts request includes amounts for AMRAAM spares. The spares consist of (1) a missile guidance section, (2) a control section, (3) repairable electronic components, and (4) other spares to support test and telemetry equipment at the depot and base level.

Results of Analysis

The Air Force's fiscal year 1994 request of approximately \$54.2 million for spares and repair parts can be reduced by \$2.7 million based on revised AMRAAM spares requirements. According to AMRAAM cost estimators, the \$8.3 million included for spares was based on a total procurement of 15,450 missiles, which was lowered to 13,038 missiles. As a result, the revised estimate for fiscal year 1994 spares is about \$5.6 million, or \$2.7 million less than requested.

AMRAAM financial management officials initially acknowledged that the potential reduction is appropriate and that only \$5.6 million was needed. However, in July 1993, an AMRAAM logistics official said that the spares requirements were \$8.1 million, but our analysis indicated that the \$8.1 million contained additives not included in the budget request. In August 1993, the AMRAAM deputy program director estimated that \$9.6 million was needed for spare parts. These changing estimates raise considerable doubts about what the funding required for spares. Unless the Air Force justifies the additional amounts, a \$2.7-million reduction can be made.

Table III.18: AMRAAM Spares and Repair Parts Funding/Request and Potential Reduction

Dollars in millions			
Budget line	Fiscal year		
	1992	1993	1994
28	\$65.317	\$51.809	\$54.177
Potential reduction	•	•	2.700

Appropriation

Missile Procurement, Air Force

**Atlas II/Small and Medium
Launch Program Office**

The Atlas II is a medium capacity launch vehicle that supports the Defense Satellite Communications System and selected research and development and classified satellites. This launch vehicle can lift 14,500 pounds to 100 nautical mile orbit. Atlas II is capable of placing 6,100 pounds into geosynchronous transfer orbit.

The Atlas II acquisition program includes nine vehicles. The Air Force's third Atlas II vehicle was launched in July 1993 and the program is expected to continue through May 1997 with the ninth launch vehicle. In fiscal year 1993, the program office purchased the last, ninth vehicle under the current contract and it now plans to initiate a follow-on Atlas II procurement program in fiscal year 1997.

Results of Analysis

The Congress can rescind \$2.1 million of the Air Force's fiscal year 1992 missile procurement funding for the Atlas II program. This rescission is possible because the program office estimates that it has \$8.5 million in unobligated fiscal year 1992 and 1993 funds available to perform special studies, take corrective actions, and address emerging issues, and unexpected anomalies related to the program. Funds of \$2.1 million for special studies were also included in the fiscal year 1994 Atlas II program request; however, the Air Force can use unobligated prior year funds for special studies.

An Atlas II program official stated that a reduction in the fiscal year 1994 budget would affect the program's full funding capability and would prefer a rescission of their fiscal year 1992 funding if any reduction were to occur.

**Table III.19: Atlas II/Small and Medium
Launch Program Funding/Request and
Potential Rescission**

Budget line	Fiscal year		
	1992	1993	1994
35	\$183.700	\$180.300	\$134.400
Potential rescission	2.100	•	•

Appropriation

Missile Procurement, Air Force

Defense Support Program

The Defense Support Program is a strategic surveillance and early warning satellite system, launched by the Titan missile, that provides warning in the event of a ballistic missile attack. The first satellite from the program was launched in the early 1970s and the most recent, satellite 16, was launched in late 1991. The program office plans to launch one satellite each year. The Air Force is requesting \$265.7 million in fiscal year 1994 for spacecraft and sensor advanced procurement, production, and launch and operations.

Results of Analysis

The Air Force's fiscal year 1994 request for the Defense Support Program can be reduced by \$41.3 million. Of the \$265.7 million requested, the program office plans to spend \$41.3 million to support the launch of satellite 20. Launch services for satellite 20 do not need to be procured until at least fiscal year 1996. Further, the launch of satellite 20 may be delayed as much as 2 years based upon assessments performed by the launch vehicle program office.

Titan program officials stated that launch schedules published by the program office are optimistic and that launch delays are likely. These officials noted that in the past such optimistic launch schedules resulted in production slow downs, storage costs for launch vehicles, and inefficient use of the launch facilities.

A program official stated that the funds requested in fiscal year 1994 for satellite 20 launch services may not be required until fiscal year 1996 unless DOD reprograms some unobligated fiscal year 1993 funds relating to Defense Support Program launch services.

Table III.20: Defense Support Program Funding/Request and Potential Reduction

Budget line	Fiscal year		
	1992	1993	1994
	Dollars in millions		
38	\$64.400	\$135.900	\$265.700
Potential reduction	•	•	41.300

Appropriation

Missile Procurement, Air Force

Defense Satellite Communications System

The Defense Satellite Communications System provides secure voice and high data rate transmission for worldwide military command and control, crisis management, relay intelligence and early warning data, treaty monitoring, and diplomatic and presidential communication. The system is designed to have a constellation of five operational and two spare satellites in geosynchronous equatorial orbit. The Air Force has requested \$32.4 million for fiscal year 1994 for launch support, reactivation of stored satellites, aerospace support, and other uses.

The Air Force had nine Defense Satellite Communications System satellites in storage that were produced in the 1980s. As a result of the lengthy storage period, the Air Force had to perform additional tests and checks on the satellites (known as reactivation) to ensure their operability. In 1990, the Air Force and its prime contractor began reactivating these satellites for launch.

Of these nine satellites, two have been reactivated and launched, two more have completed reactivation, and a fifth is undergoing reactivation. The two reactivated satellites and the one undergoing reactivation are scheduled for launch in December 1993, May 1994, and May 1996, respectively. An additional satellite, the sixth of the nine, is to begin reactivation in fiscal year 1994 for launch in May 1995.

Results of Analysis

The Air Force's fiscal year 1994 request for the Defense Satellite Communications System can be reduced by \$3.1 million, and \$1.7 million in fiscal year 1992 funds can be rescinded. The \$3.1 million is not needed because the reactivation of a sixth satellite in fiscal year 1994 is not necessary to fulfill the current launch schedule. The \$1.7 million in fiscal year 1992 funds for a beam forming network modification can be rescinded because the Air Force has not authorized the modification.

Sufficient satellites have been reactivated to support launches scheduled through May 1995. The Air Force could delay the reactivation of the sixth satellite until fiscal year 1995 for the May 1996 launch. Delaying the reactivation and launch of this satellite to fiscal year 1995 allows more than enough time for the 22-week reactivation period before the May 1996 scheduled launch and allows the Air Force to better estimate the Defense Satellite Communications System launch schedule.

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According to a program official, contractor estimates indicate that the delay of the sixth satellite's reactivation until fiscal year 1995 would likely add \$600,000 to reactivation costs. However, if the launch schedule slips—requiring storage and retesting the satellite after reactivation—the costs for retesting could be greater than the estimated cost to defer reactivation. For example, a program official said the program office is budgeting approximately \$2.5 million for additional tests for two satellites that were reactivated and returned to storage due to launch delays. The official agreed that reactivation of the sixth satellite in fiscal year 1994 is not mission critical. Further, DOD officials stated that the Defense Satellite Communications System launch previously scheduled for the summer of 1993 has been delayed until December 1993.

The Air Force has designated \$1.7 million of its remaining fiscal year 1992 funds for a beam forming modification. This modification for up to five satellites is expected to provide greater capacity to tactical users such as Army ground forces at an estimated cost of \$150 million. Program officials stated that the modification is currently not authorized. Further, they stated that initial assessments indicate the modification, if approved, is likely to affect current launch schedules.

Table III.21: Defense Satellite Communications System Funding/Request and Potential Reduction and Rescission

Budget line	Fiscal year		
	1992	1993	1994
	40	\$55.500	\$25.100
Potential reduction	•	•	3.100
Potential rescission	1.700	•	•

Appropriation

Other Procurement, Air Force

Military Satellite Communications Program

The Military Satellite Communications Program includes the Air Force's Milstar terminal production program. Milstar is a joint service program to develop and acquire extremely high frequency satellites, mission control segments, and terminals for survivable, jam-resistant, secure communications.

The Air Force requested fiscal year 1994 funding of approximately \$85.3 million for the Military Satellite Communications Program. This amount includes \$18.4 million for 60 sets of Transportable Time

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Distribution System components for the Milstar terminals. These components allow mobile terminal users to initiate operations with the satellites after being shut down. The fiscal year 1994 funding would complete the quantity required.

Results of Analysis

The Air Force's fiscal year 1994 request for the Military Satellite Communications Program can be reduced by about \$17.2 million because all but \$1.2 million of the required Transportable Time Distribution Systems have already been bought.

According to a program official, nearly all the components have been purchased with fiscal year 1993 funds, and the additional funding needed to buy the remaining components has decreased from \$18.4 million to \$1.2 million.

The satellite program office wants to retain the approximately \$17.2 million we identified for reduction to have in reserve for anticipated deficiencies. However, a reserve for contingencies is not the purpose for which the funds were requested. The need to fund for these contingencies was not included in the budget request.

Table III.22: Military Satellite Communications Program Funding/Request and Potential Reduction

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
132	\$260.507	\$84.516	\$85.338
Potential reduction	•	•	17.197

Appropriation

Other Procurement, Air Force

Space Modifications

The Space Modifications program is to modify space systems ground equipment. Fiscal year 1994 funds are requested to improve reliability, maintainability, and capability at Ground-based Electro Optical Deep Space Surveillance (GEODSS) sites.

Results of Analysis

The Air Force's fiscal year 1994 Space Modifications request of approximately \$25.8 million can be reduced by \$2.9 million because of changes in the requirements for the GEODSS modification program.

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Program office officials informed us that funding requirements decreased by \$2.9 million because of these changes.

**Table III.23: Space Modifications
Funding/Request and Potential
Reduction**

Dollars in millions			
Budget line	Fiscal year		
	1992	1993	1994
146	\$15.686	\$15.635	\$25.807
Potential reduction	•	•	2.900

Potential Reductions, Rescissions, and Restrictions to Multiservice and Defensewide Procurement Programs

We identified about \$29.8 million in potential reductions to the fiscal year 1994 procurement requests, \$60 million in potential rescissions in fiscal year 1993 funds, and \$10 million in potential restrictions to the obligational authority for the defensewide fiscal year 1994 procurement budget request. The following section provides a brief description of our analysis and proposed actions. Table IV.1 summarizes the proposed actions.

Table IV.1: Summary of Potential Reductions, Rescissions, and Restrictions to Multiservice and Defensewide Programs

Dollars in millions

Program	Potential fiscal year 1994 reductions	Potential prior year rescissions	Potential restrictions	See page
Aircraft Procurement, Air Force				
Advanced Tactical Air Reconnaissance System	\$13.433	•	•	80
Aircraft Procurement, Navy				
Advanced Tactical Air Reconnaissance System	6.450	•	•	80
Subtotal	19.883	•	•	
Procurement, Defensewide				
Short Range Unmanned Aerial Vehicle	9.875	•	\$10.000	81
Subtotal	9.875	•	10.000	
National Guard and Reserve Equipment, National Guard Bureau				
C-23 Aircraft	•	\$60.000	•	82
Subtotal	•	60.000	•	
Total	\$29.758	\$60.000	\$10.000	

Appropriation

Aircraft Procurement, Air Force
Aircraft Procurement, Navy

Advanced Tactical Air Reconnaissance System

The Advanced Tactical Air Reconnaissance System program was being designed to replace obsolete wet-film photographic reconnaissance systems that DOD officials stated were not adequate during Operations Desert Shield/Storm. Aircraft equipped with the system's sensor suites were to provide near real time collection of battlefield information for tactical use such as bomb damage assessment. The system was a joint Air Force and Navy program. The Air Force was the executive service for the development of the program. However, the Navy was to procure the initial production lot of sensor suites for use on Marine Corps F/A-18 aircraft.

**Appendix IV
Potential Reductions, Rescissions, and
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Results of Analysis

The Air Force's fiscal year 1994 budget request of approximately \$13.4 million and the Navy's request of approximately \$6.5 million can be denied because the Advanced Tactical Air Reconnaissance System contract was canceled effective June 25, 1993. Air Force and Navy program officials agreed with our assessment that the fiscal year 1994 procurement budget requests for the system can be eliminated.

Table IV.2: Advanced Tactical Air Reconnaissance System Funding/Request and Potential Reductions

Budget line	Fiscal year		
	1992	1993	1994
59 (Air Force)	•	\$12.812	\$13.443
Potential reduction	•	•	13.433
52 (Navy)	\$4.500	0.771	6.450
Potential reduction	•	•	6.450
Total	•	•	\$19.883

Appropriation

Procurement, Defensewide

Short-Range Unmanned Aerial Vehicle Program

The Short-Range Unmanned Aerial Vehicle, a part of the Joint Remotely Piloted Vehicles line item in the fiscal year 1994 budget request, is one system in the family of unmanned aerial vehicles. It is a pilotless aircraft resembling a small airplane that can be controlled from a ground station. The short-range system is to accomplish various missions by flying over enemy territory and transmitting video imagery to ground stations for use by military commanders.

In 1989, DOD initiated acquisition of the short-range system as a "non-developmental" item. In early 1993, a low-rate production contract was awarded for seven systems. Each system includes eight air vehicles with payloads, a launch and recovery station, ground stations for controlling flight and processing from the air vehicles, and other related equipment.

Results of Analysis

The Congress can reduce the Short-Range Unmanned Aerial Vehicle fiscal year 1994 budget request by approximately \$9.9 million and restrict obligational authority for an additional \$10 million. The reduction is possible because preproduction testing, previously scheduled for fiscal year 1994, will not be conducted until fiscal year 1995. The restriction is

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possible because project office officials could not provide a basis for estimates of preparatory costs for such tasks as a test and evaluation plan and a systems support package.

Although operational testing has been deferred until fiscal year 1995, project office officials state that \$10 million of the approximately \$19.9 million requested is for operational testing expenses, such as accomplishing preparatory tasks, including a test and evaluation plan, a system support package, a threat test support package, a training test support package, and a new equipment training and test support package. However, project office officials could not provide the basis for estimates of the cost of these tasks. Thus, the Congress can restrict use of the \$10 million until DOD provides adequate justification for these funds.

Table IV.3: Short-Range Unmanned Aerial Vehicle Funding/Request and Potential Reduction and Restriction

Budget line	Dollars in millions		
	Fiscal year		
	1992	1993	1994
4	\$129.700	\$137.800	\$69.300
Potential reduction	•	•	9.875
Potential restriction	•	•	10.000

Appropriation

National Guard and Reserve Equipment, National Guard Bureau

C-23 Aircraft

For fiscal year 1992, the Congress added \$60 million to the National Guard and Reserve Equipment appropriations to procure 10 C-23 fixed-wing aircraft. These funds were provided to the Fixed Wing Product Manager's Office, U.S. Army Aviation and Troop Command, St. Louis, Missouri. These aircraft are used primarily for movement of personnel and, to a lesser extent, the transfer of material.

Results of Analysis

Unless the Congress remains convinced the funds should be expended, it can rescind \$60 million in fiscal year 1992 funding for National Guard and Reserve fixed-wing aircraft. These funds were not obligated as of September 3, 1993. Program officials said that neither the Office of the Secretary of Defense nor the Army had established a requirement for these aircraft.

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The Army is attempting to lower its total number of fixed-wing aircraft. Procuring these aircraft would delay this effort. Also, funds are not available for the additional operation and maintenance costs that would be incurred. On September 3, 1993, a product management official said that the fiscal year 1992 funds for the C-23 aircraft could be rescinded because of the lack of valid requirements for these aircraft.

**Table IV.4: C-23 Aircraft Funding and
Potential Rescission**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
36	\$60.000	\$60.000	•
Potential rescission	60.000	•	•

Scope and Methodology

We selected for detailed review DOD procurement programs that we identified from our ongoing assignments as well as the survey phase of this assignment as having cost, schedule, performance, or programmatic issues. To achieve our objectives, 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 discussed the facts in this report with DOD and program officials and incorporated their comments as appropriate.

We performed our work at numerous DOD and military service locations. For example, we visited the Air Force Materiel Command, Wright-Patterson Air Force Base, Ohio; Army Missile Command and U.S. Ballistic Missile Defense Organization, Huntsville, Alabama; Naval Sea Systems, Naval Space and Warfare, and Naval Air Systems Commands, Arlington, Virginia; Air Force Materiel Command Electronics Systems Center, Hanscom Air Force Base, Massachusetts; Army Communications-Electronics Command, Fort Monmouth, New Jersey; Army Tank-Automotive Command, Warren, Michigan; Army Aviation and Troop Command, St. Louis, Missouri; Air Force Space and Missile System Center, Los Angeles, California; and U.S. and Air Force Space Commands, Colorado Springs, Colorado. We also contacted program representatives in the Office of the Secretary of Defense and the Departments of the Army, the Navy, and the Air Force.

We performed our review from October 1992 through September 1993 in accordance with generally accepted government auditing standards.

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Appropriation

Aircraft Procurement, Army

Industrial Facilities

The Army included in its fiscal year 1994 request approximately \$7.3 million to establish, modernize, expand, and replace industrial facilities used in production, production testing, and depot level maintenance. The request includes about \$4.9 million to procure depot maintenance plant equipment at the contractor's facility for the OH-58D Kiowa Warrior helicopter.

Results of Analysis

The Congress can reduce the Army's fiscal year 1994 industrial facilities request of approximately \$7.3 million by about \$4.9 million because the Army does not have a valid requirement for this amount. The \$4.9 million was requested in order to procure depot maintenance plant equipment test stations for Kiowa Warrior components at the Sacramento Army Depot. The funding is not required because (1) the Sacramento depot was closed and (2) no other depot has been identified as an alternate location for the equipment. Army program officials agreed that the Army does not require the funds.

**Table I.3: Industrial Facilities
 Funding/Request and Potential
 Reduction**

Budget line	Fiscal year		
	1992	1993	1994
	33	\$27.624	\$14.941
Potential reduction	•	•	4.921

Appropriation

Missile Procurement, Army

Hellfire

The Hellfire missile system is the main armament on the Army's Apache helicopter and the Marine Corps' Cobra helicopter. The system is designed to defeat stationary or moving tanks with minimal exposure of the delivery helicopter to enemy fire. The Army procures Hellfire missiles for its use and for the Marine Corps.

The Army has procured several versions of the Hellfire missile. At the present time, it is phasing out production of an interim missile that Rockwell International Corporation produces. The Army has completed development and testing of a more advanced missile—the Hellfire II—designed to have a more capable warhead and to be more effective in

Appropriation

Missile Procurement, Army

Javelin

The Javelin is designed to be a medium-range, portable antiarmor system for use in rapid deployment operations, rough terrain, and air assault operations. It is intended to defeat tanks and other targets expected on the battlefield and to replace the Dragon weapon system in the Army and Marine Corps' inventories. The system will consist of a missile; an expendable container and launch tube, which will house the missile; and a reusable command and launch unit for target acquisition and surveillance.

Results of Analysis

The Army's fiscal year 1994 request of approximately \$207.3 million for the Javelin can be reduced by \$2.1 million because the request exceeds requirements. In addition, obligational authority for the approximately \$205.2 million remaining can be restricted until the Army ensures that the Javelin is ready to begin low-rate initial production.

Request Exceeds Requirements

The Javelin fiscal year 1994 request includes \$2.1 million in excess of requirements. The Javelin project manager agreed; however, he said the amount was included in anticipation of appropriation adjustments. He said, for example, in fiscal year 1993 the Office of the Secretary of Defense and the Army withheld funds from the project manager. Therefore, he added 1 percent to the fiscal year 1994 request in anticipation of similar adjustments.

A program management official said that, based on a contractor's preliminary estimate, costs will exceed the request. However, the project manager stated that the Army will likely negotiate the price downward, but he did not know the specific amount. Therefore, actual costs are unknown at this time. Thus, the request can be reduced by \$2.1 million because the amount exceeds program requirements.

Low-Rate Production Schedule Uncertain

Obligational authority for about \$205.2 million can be restricted until the Army determines when it will begin production. The Army's procurement request for the Javelin was based on the assumption that low-rate initial production would begin in April 1994. However, before beginning low-rate initial production, the Army planned to award a contract for long lead time items in April 1993. Estimates for time required for this effort ranged from 9 months to 15 months.

Fiscal Year 1994 Request

The Army requested \$15 million to begin closing the TOW missile production line in 1994, but our work indicates there may be a continuing need for production capability beyond fiscal year 1994. However, even if funding were needed to begin closing the production line, the project office has no firm estimate of the cost.

Additional missiles may still be purchased. Under the fiscal year 1993 contract, final TOW missile deliveries are scheduled for February 1995. However, the contract contains options, which will expire on September 30, 1993, for an additional 4,815 Marine Corps missiles and 3,000 Army missiles. Congressional approval has been granted to reprogram \$48 million to buy the Marine Corps missiles, and the Army has reprogrammed \$23.9 million to buy additional Army missiles. Also, the Senate and House Committees on Armed Services recently recommended funds for fiscal year 1994 for TOW missile production to maintain a warm production base.

In addition, according to Army foreign sales officials, foreign military sales are probable; thus, the plant would need to remain operational. There are seven potential customers for 1994 and beyond involving combined sales of 11,400 missiles—including 4,400 missiles in fiscal year 1994.

An Army study team investigated several options to closing production, including (1) disposing all production equipment and (2) lay away the production capability to allow a later restart. These options range in price from \$3.4 million to \$41.3 million. Program management officials stated that no firm decision has been made regarding which option they may use, when they plan to select an option, or when they would implement the chosen option. Furthermore, program management officials are not certain whether all or part of the production line would be closed.

The TOW deputy project manager said that, even if anticipated foreign military sales occur or contract options are exercised, a portion of the line may still be closed. He also discussed the possibility of funding environmental cleanup costs. However, he had no firm data or estimates of the requirements. With all the questions about what portion, if any, of the production line may be closed and the lack of any firm estimate on the costs associated with any such closing, the Congress can restrict obligational authority for \$15 million until the Army determines how much funding is actually needed.

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qualified until a more advanced version of the rocket is ready for production. The contractor estimated the cost to maintain the production base to be about \$17 million, but the Army requested only about \$9.8 million.

Nevertheless, the production line may be maintained without the requested funding. Program management officials told us that production of at least 144 rockets each year would keep the line qualified. Two foreign military sales cases are currently pending for fiscal year 1994—which could result in production of almost 12,700 rockets. A U.S. foreign military sales official characterized these cases as having a high probability for sales.

The project manager agreed that foreign military sales could maintain the production line. However, he stated that foreign sales quantities may not be sufficient to maintain production for 12 months and that monthly production is necessary to maintain the line. Without a full year of production, some fiscal year 1994 funding would be required to maintain the warm production base.

The project manager also stated that the House and Senate Committees on Armed Services had recommended procurement of additional rockets in fiscal year 1994 for the U.S. inventory. However, he noted that more than the amount requested (\$9.8 million) would be needed to buy the number of rockets recommended by the Committees. Until the size of the production orders is clear, obligational authority for the funding can be restricted.

Table 1.7: Multiple Launch Rocket System Funding/Request and Potential Restriction

Budget line	Fiscal year		
	1992	1993	1994
12	\$59.700	\$109.766	\$9.801
Potential restriction	•	•	9.801

Appropriation

Wheeled and Tracked Combat Vehicles, Army

Bradley Base Sustainment Program

The Bradley Base Sustainment Program is intended to sustain the industrial base and modernize the Bradley fleet by upgrading first generation Bradleys—A0 models—to the current Bradley configuration—A2 models. This upgrade will require both the addition of

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**Table I.8: Bradley Base Sustainment
Funding/Request and Potential
Restriction**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
3	•	\$124.593	\$192.437
Potential restriction	•	•	192.437

Appropriation

Other Procurement, Army

**High Mobility
Multipurpose Wheeled
Vehicle**

The High Mobility Multipurpose Wheeled Vehicle (HMMWV) is a lightweight (1.25 ton), four-wheel drive, tactical truck. Variants include an antitank weapons carrier, an armament carrier, a shelter carrier, an ambulance, and a utility cargo carrier.

Results of Analysis

The Congress can restrict the Army's obligational authority for about \$53.3 million of the fiscal year 1994 request of approximately \$242.7 million for HMMWV scout vehicles until the Army develops firm plans for the expenditure of these funds. The restriction is possible because the Army originally justified the expenditure of these funds to acquire new HMMWV scout vehicles, but now plans to use these funds to add armor to 50 existing HMMWVs. The requirement for the additional armor was identified during the Somalia operations. On September 7, 1993 program officials said they were unable to provide the amounts of the funds needed for this purpose because they were still developing the plans for the new scout vehicles.

**Table I.9: HMMWV Funding/Request
and Potential Restriction**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
4	\$275.888	\$220.388	\$242.737
Potential restriction	•	•	53.313

Appropriation

Other Procurement, Army

Palletized Load System

The Palletized Load System consists of a truck, trailer, and removable cargo bed that is generally referred to as a flatrack. The system is designed to improve the efficiency and effectiveness of ammunition resupply by

flatracks. Further, these flatracks are for storage requirements; thus, a short delay in their availability would not affect fielding the load system and troop training.

Program officials agreed that the milestones are optimistic and that a short delay in contract awards would not affect load system fielding and troop training. However, they said that, if the Congress reduced the fiscal year 1994 budget request, they would not be able at this late date to place the flatracks in the fiscal year 1995 request. Also, they said they could obtain all but 700 of the flatracks under options in the current contract and they believe this would be a small business award because the subcontractor, which would produce the flatracks, is a small business. Rather than lose the fiscal year 1994 money, they said they could make this award in November 1993. However, they would prefer to continue with the current plan, which maximizes small business participation.

Army budget guidance provides that, if funds can be deferred to a future fiscal year and still be available in time to support a scheduled production, the funds should not be requested in an earlier fiscal year. Thus, the Army's fiscal year 1994 request for the load system can be reduced by approximately \$113.3 million because the funds are not needed until fiscal year 1995.

Operational Test Dispute

In April 1993, the Office of the Secretary of Defense's Director for Operational Test and Evaluation reported to the Congress that during operational testing both the load system tractor and trailer failed to meet reliability, availability, and maintainability requirements by a significant margin. For example, the truck demonstrated a capability to run 558 mean miles-between-operational-mission-failures, short of its requirement of 1,500 mean miles between such failures.

Program officials disagreed with the Director's conclusions; they believe that the operational test results show that the load system demonstrated the capability to meet the requirements. They believe the test results shown in the Director's report are based on criteria different from the criteria the Army used to establish the requirements and to conduct the load system operational test. Moreover, they believe any restriction of funding beyond February 1994 would have severe consequences on the program. On the basis of the current delivery schedule, the Army plans to award the 5th-year production on the contract no later than February 28, 1994. We are not aware of any reasons why (1) the Office of the Secretary of Defense's Director for Operational Test and Evaluation and the Army

An early 1993 medium ground station module operational assessment revealed major reliability problems. Medium ground station modules have demonstrated some improvement since then, but reliability is still low. According to a program official, the reliability problem will be resolved through software upgrades made during the 18-month period it will take to deliver the system's hardware. The reliability requirement is expected to be achieved in April 1995.

In November 1991, the Air Force and Army Chiefs of Staff agreed on a Joint Surveillance Target Attack Radar System contingency capability to respond to tasking from the Joint Chiefs of Staff. The agreement maintains the capability demonstrated in Operation Desert Shield/Desert Storm, which required six interim ground station modules. In addition to the six interim ground station modules, four existing medium ground station manufacturing development models are now available with enhanced capabilities over the interim ground station modules. Therefore, current contingency units meet or exceed both the capability and the quantity of ground station module units used during Desert Shield/Storm.

Table I.11: Joint Surveillance Target Attack Radar System Funding/Request and Potential Reduction and Rescission

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
63	•	\$35.200	\$57.900
Potential reduction	•	•	57.900
Potential rescission	•	35.200	•

Appropriation

Other Procurement, Army

Advanced Field Artillery Tactical Data System

The Advanced Field Artillery Tactical Data System is one of five separate command and control segments, designed to use common hardware and software, which constitute the Army Tactical Command and Control System. This tactical data system is intended to replace the Tactical Fire Direction System as a more capable, user-friendly system to automate weapon systems management.

Results of Analysis

The Army's fiscal year 1994 request of about \$24.9 million to procure 273 common hardware and software computers and establish a training base for the Advanced Field Artillery Tactical Data System can be reduced

Appropriation

Other Procurement, Army

Combat Service Support Control System

The Combat Service Support Control System is one of five command and control segments, which use common hardware and software, that constitute the Army Tactical Command and Control System. The support control system automates the management of logistical, medical, and personnel information.

Results of Analysis

The Army's fiscal year 1994 request of approximately \$12.8 million for 108 support control system computers can be denied because the test scheduled to support the production decision has slipped by 9 months. Furthermore, the Army has already purchased sufficient numbers of computers to begin fielding the support control system in 1994 if the operational test is successful.

Support control system operational tests by the Army III Corps units have slipped from October 1993 to July 1994 due to difficulties developing acceptable software. The Army project manager plans to conduct a 1-week demonstration in November 1993 to support a low-rate production decision instead of the scheduled full-rate production decision. If the demonstration is successful, the Army project manager intends to issue the low-rate production contract for 108 computers in February 1994 to equip the remaining Army III Corps units. The Army has deferred the full-rate production decision from August 1993 to October 1994.

However, the Army does not need to issue a low-rate production contract because computers from the Army's Maneuver Control System program could be fielded to the Army III Corps. This program, now experiencing more than a 2-1/2-year delay in its production decision milestone (which has been postponed to April 1996), has 225 computers of the model to be used in the support control system's operational test. Although an Army program executive office official stated that the Maneuver Control System computers are needed for the program's initial tests and software development, we found that these tests and development efforts would require only 106 of the 225 computers. Therefore, the low-rate initial production requirement for 108 computers for the support control system still can be met by the remaining available Maneuver Control System computers.

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**Table I.14: Initial Spares-Program
Executive Office, Command and
Control Systems Funding/Request and
Potential Reduction**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
100	•	\$9.500	\$20.100
Potential reduction	•	•	3.100

Appropriation

Other Procurement, Army

**Water Purification Unit,
Reverse Osmosis,
3,000 Gallons Per Hour**

The Congress provided about \$16.7 million for fiscal year 1992 and about \$12.3 million for fiscal year 1993 for procurement of 3,000 Gallon Reverse Osmosis Water Purification Units. This equipment is used to purify water for Army troops in the field.

Results of Analysis

The Congress can rescind \$2.1 million of the Army's fiscal year 1992 funds and \$2.8 million of the fiscal year 1993 funds for water purification units. These funds are available for rescission because the provided funds exceeded the actual contract costs by \$2.6 million in fiscal year 1992 and \$4.5 million in fiscal year 1993. Army officials said the Army has obligated \$2.2 million of these funds—\$0.5 million of fiscal year 1992 funds and \$1.7 million of fiscal year 1993 funds—for water drums, water tanks, and engineering changes to the purification units.

**Table I.15: Water Purification Unit,
Reverse Osmosis, 3,000 Gallons Per
Hour Funding and Potential
Rescissions**

Dollars in millions

Budget line	Fiscal year		
	1992	1993	1994
139	\$16.698	\$12.296	•
Potential rescissions	2.100	2.800	•

Appropriation

Other Procurement, Army

Spares and Repair Parts

For fiscal year 1993, the Congress provided about \$10.1 million to the Army to procure spares to support initial fielding of new or modified systems. The Army allocated \$5 million of these funds to the U.S. Army Aviation and Troop Command, St. Louis, Missouri.

Potential Reductions, Rescissions, and Restrictions to Navy Procurement Programs

We identified about \$59.2 million in potential reductions in the Navy's fiscal year 1994 procurement budget requests, about \$542.3 million in potential rescissions in prior year funds, and about \$143.3 million in potential restrictions to the Navy's fiscal years 1992, 1993, and 1994 procurement obligational authority. The following section provides a brief description of our analysis and proposed actions. Table II.1 below summarizes the proposed actions.

Table II.1: Summary of Potential Reductions, Rescissions, and Restrictions to Navy Programs

Dollars in millions

Program	Potential fiscal year 1994 reductions	Potential prior year rescissions	Potential restrictions	See page
Weapons Procurement				
Drones and Decoys	•	\$10.000	•	33
MK-46 Torpedo Modification	•	37.847	•	34
Subtotal	•	47.847	•	
Shipbuilding and conversion				
SLQ-32 Shipboard Electronic Warfare System	35.187	101.070	•	36
Coastal Minehunter, MHC-51 Class	•	9.343	•	37
AOE Fast Combat Support Ship	•	•	\$143.348	38
Subtotal	35.187	110.413	143.348	
Other Procurement				
Installation Funds Annualization	•	190.612	•	39
Somalia Relief Program	•	86.400	•	40
Standard Boat Program	•	5.030	•	41
AN/BQQ-5 Sonar Sensors	•	9.370	•	41
AN/SQQ-89(V) Surface Anti-Submarine Warfare Combat Systems	•	33.300	•	42
Command, Control, Communications Countermeasures Support Equipment	•	4.541	•	43
AN/WLQ-4(V) Improvements	•	3.810	•	44
Link 16 Joint Tactical Information Distribution System	24.000	46.002	•	46
AEGIS Support Equipment	•	5.000	•	46
Subtotal	24.000	384.065	•	
Total	\$59.187	\$542.325	\$143.348	

Appropriation

Weapons Procurement, Navy

**MK-46 Torpedo
 Modification**

This line item funds torpedo modifications, including Modification Seven (MOD 7), designed to upgrade the performance capabilities of the current torpedo. Details on the MOD 7 program are classified.

The Congress provided about \$48.8 million in fiscal year 1993 for MK-46 modifications, of which about \$38.4 million was for MOD 7 and about \$10.4 million for other modifications. The Navy did not request fiscal year 1994 funds for the MOD 7 and intends to use the fiscal year 1993 funds for fiscal year 1994 contracts.

Results of Analysis

The Congress can rescind about \$37.9 million of the Navy's fiscal year 1993 funds of about \$48.8 million because the addition of the MOD 7 to an existing system will result only in a marginal increase, if any, in overall system performance.

Our ongoing review indicates that the system to use the MOD 7 is about 15 months behind schedule. The majority of the delay was caused by problems experienced during technical evaluation in August 1992. Because of these problems, the technical evaluation was suspended, resulting in test platform schedule problems. The MOD 7 technical evaluation was restarted in May 1993, and the operational evaluation is scheduled to begin in November 1993. The Navy Comptroller has placed about \$37.8 million of the fiscal year 1993 funds on hold until the Navy approves the system for production.

Our review indicates that if the MOD 7 met its performance requirements, it would only add a marginal increase to overall system performance. However, various tests conducted to date indicate that the MOD 7 is not meeting system performance requirements and, therefore, would add little, if any, improvement to overall system effectiveness. Navy program officials disagree with our assessment. We used Navy test data and results and Navy system performance formulas contained in Navy test plans.

**Table II.3: MK-46 Torpedo
 Modifications Funding/Request and
 Potential Rescission**

Budget line	Fiscal year		
	1992	1993	1994
35	\$12.441	\$48.769	\$24.099
Potential rescission	•	37.847	•

had addressed all major system modifications in accordance with the test plan. Finally, they said that the proposed funding actions would prevent new ships from receiving the SLQ-32 system and would be detrimental to the Navy's shipboard self-defense capability.

We disagree with the Navy program officials. The 1992 testing, which the Navy believes was realistic, was performed in a single-ship environment and would, therefore, not have revealed SLQ-32 problems disclosed in the more intense and realistic multiship environment of earlier system testing. Further, although limited maintainability tests may have been included as part of the 1992 test, maintainability testing was omitted from the 1992 operational test. The Navy has scheduled additional testing in late 1993 and 1994 to assess the system's maintainability. Testing performed in 1982 should not be considered because of the many design changes made since then. Moreover, system modifications, shown to be defective in previous tests, are currently installed on some ships and are being incorporated into new production systems, but were excluded from the 1992 tests. Finally, the proposed funding actions would delay, but not necessarily prevent, new ships from receiving the SLQ-32 system. The alternative of proceeding with additional procurement before the system demonstrates satisfactory performance in realistic operational tests could only hasten the additional premature installation of defective or unproven systems.

Table II.4: SLQ-32 Funding/Request and Potential Reductions and Rescissions

Budget line	Fiscal year		
	1992	1993	1994
7 (DDG-51)	\$3,956.476	\$3,233.315	\$2,642.772
Potential reduction	•	•	25.785
Potential rescissions	38.957	62.113	•
9 (LHD-1)	•	•	893.848
Potential reduction	•	•	9.402

Appropriation

Shipbuilding and Conversion, Navy

Coastal Minehunter, MHC-51 Class

The Coastal Minehunter, MHC-51—a glass reinforced plastic hull ship—is used to clear mines from littoral areas, harbors, and coastal waters for battle group and amphibious operations. In fiscal year 1993, about \$234.6 million was provided to construct two MHC-51 class ships.