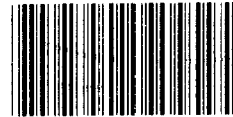


YB 95 114224

BY THE COMPTROLLER GENERAL  
**Report To The Chairman,  
Committee On Appropriations,  
United States Senate**  
OF THE UNITED STATES

**Congress Cannot Rely On The Military  
Services' Reported Real Property  
Maintenance And Repair Backlog Data**

DOD's failure to ensure uniform interpretation of its definition and instructions by the military services has resulted in various inconsistencies in the systems for identifying and reporting the backlog. Further, problems in the management of the services' reporting systems also significantly impair the credibility of the reported backlog.



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DOD has not defined what a manageable level of backlog should be nor provided adequate guidance on the uses to be made of the backlog in the routine real property management decisionmaking processes.

This report recommends several ways DOD can improve backlog reporting and management.



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COMPTROLLER GENERAL OF THE UNITED STATES

WASHINGTON, D.C. 20548

B-163500

The Honorable Mark O. Hatfield  
Chairman, Committee on Appropriations  
United States Senate

Dear Mr. Chairman:

In response to the request of your Committee in its report No. 95-1264, dated October 2, 1978, we reviewed the Department of Defense's backlog of real property maintenance and repair projects.

The Committee requested that the review be done in phases over a 2- to 3-year period. On August 3, 1979, we reported on the first phase of our review (LCD-79-314).

This report is the second phase of our review. Because of the scope of coverage in this phase, no further work is planned as agreed with Committee staff.

As arranged with your office, we are sending copies of this report to the Chairmen, House Committee on Appropriations, Senate and House Committees on Armed Services, Senate Committee on Governmental Affairs, and House Committee on Government Operations; the Director, Office of Management and Budget; and the Secretary of Defense.

Sincerely yours,

A handwritten signature in black ink, appearing to read "James A. Starks".

Comptroller General  
of the United States



COMPTROLLER GENERAL'S  
REPORT TO THE COMMITTEE  
ON APPROPRIATIONS  
UNITED STATES SENATE

CONGRESS CANNOT RELY ON THE  
MILITARY SERVICES' REPORTED  
REAL PROPERTY MAINTENANCE  
AND REPAIR BACKLOG DATA

D I G E S T

The reported backlog of the Department of Defense's (DOD's) real property maintenance and repair has been constrained by the Navy and the Air Force and is hundreds of millions of dollars less than the actual level of deficiencies. Consequently, the Congress is not receiving a true picture of the backlog. DOD's failure to ensure uniform interpretation of its definition and guidance for backlog reporting has resulted in

- the Navy revising its reporting system to allow for showing only part of its total maintenance and repair backlog;
- the Air Force designing its system to report as backlog only part of its real property deficiencies to be corrected by commercial contract;
- Army and Marine Corps systems generally reporting unconstrained backlog; and
- certain commands and installations taking individual actions, some in violation of service regulations, which serve to further constrain the levels of reported backlog.  
(See p. 4.)

Also, the Congress cannot rely on even that portion of the backlog that the services are reporting as being accurate and valid.

DOD has not ensured credible backlog reports by the services. The reported backlog data is further understated and unreliable because

- facility inspection procedures do not ensure all deficiencies are identified for reporting,

Tear Sheet. Upon removal, the report cover date should be noted hereon.

--DOD's requirement that the backlog be identified from installation work plans is not consistently followed,

--cost estimates for backlog projects are not always adequately developed or updated to reflect increased facility deterioration and price escalation, and

--inadequate command review and validation has resulted in the reporting of erroneous and inconsistent data and questionable adjustments to reported installations' backlog. (See p. 15.)

DOD has not issued criteria for the services to use in establishing a manageable or acceptable level of backlog nor has it provided adequate guidance on the uses to be made of backlog data in the routine real property management decisionmaking process. DOD must define what would be an acceptable maintenance backlog that would allow activities to adequately carry out their missions while also maintaining real property in an acceptable physical condition for future use. After establishing these acceptable or manageable levels, activities would be able to properly schedule maintenance work and request the needed funding. (See p. 23.)

DOD has established separate categories within the base operating support program to give increased visibility and consistent treatment to the real property maintenance and repair effort. However, this action will not (1) eliminate the need to establish an adequate maintenance floor which considers the annual maintenance and repair requirements, coupled with a defined manageable level of backlog, or (2) ensure that commands and installations adequately consider the backlog in their allocation and application of available maintenance and repair funds. (See p. 28.)

GAO believes a reasonably accurate maintenance and repair backlog which is based on uniformly applied DOD criteria as to what an acceptable maintenance level of backlog should be would enable the services, DOD, and the Congress to evaluate the relative condition of DOD's physical plant, establish the level of funding required to maintain an acceptable plant condition, and determine the optimum allocation of funding based upon relative plant needs.

#### RECOMMENDATIONS

To ensure that DOD and the Congress receive accurate and valid information reflecting the true level of backlog, the Secretary of Defense should:

--Require the military services to modify their systems where necessary and implement controls to ensure that they uniformly interpret the definition and instructions for reporting backlog.

--Report DOD's unconstrained total requirements in its annual budget presentation to provide increased visibility in the area of real property maintenance and repair.

--Require the services to improve their inspections and planning to ensure that maintenance and repair project identifications are complete and that projects are validated and based on adequately derived and current cost estimates.

To improve the overall management of DOD's backlog with a view toward its reduction, the Secretary of Defense should:

--Establish and issue criteria for the services to use in determining manageable or acceptable levels of maintenance backlog.

--Issue guidance to provide that the defined manageable level be uniformly used by all the military services in evaluating relative plant condition and the adequacy and effectiveness of funding decisions related to real property.

#### AGENCY COMMENTS

With one exception, DOD generally agreed with GAO's conclusions and recommendations. DOD did not agree that it should report unconstrained total requirements in its annual budget presentation.

DOD said that the backlog is intended to be a high priority, essential list of maintenance and repair deficiencies and that reporting unconstrained total deficiencies would require additional personnel and increased administrative workload. Further, DOD felt that unconstrained backlog reporting would not be meaningful or effective in making resource decisions.

GAO believes that DOD's intended action to identify high priority, essential backlog projects is good management and beneficial for immediate budget decisions. However, reporting the total backlog should not significantly increase personnel or administrative workload because the services already have mechanisms for identifying the total backlog. GAO believes that total backlog must be reported and used to ensure effective long-term program management by DOD and the Congress. In view of the continuing interest by congressional committees in the growing backlog, GAO still believes that the total backlog should be considered in the development of a meaningful manageable level and be reported to the Congress, unless DOD can reach agreement with the committees that full disclosure is not required. (See p. 34.)



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ABBREVIATIONS

BMAR	backlog of maintenance and repair
DOD	Department of Defense
GAO	General Accounting Office

## CHAPTER 1

### INTRODUCTION

Since the early 1960s the Congress has been concerned about the growth of real property maintenance and repair backlog within the Department of Defense (DOD) and the military services. To encourage DOD and the services to contain the the backlog, the Congress has

- established a statutory floor of operation and maintenance funds for the services to use only for real property maintenance and repair;
- provided funds in excess of those requested by the services for real property maintenance and repair; and
- issued several directions to reduce the backlog, including adoption of a containment policy, establishing the fiscal year 1978 backlog as the baseline not to be exceeded in the future.

In 1960 DOD required the services to begin reporting annually the backlog of maintenance and repair (BMAR) for real property. These reports serve as the basis for the BMAR reported to the Congress each year by the services as part of their budgetary process. This backlog is recognized as a key indicator of the adequacy of the annual maintenance and repair funding. DOD's initial BMAR definition and resulting data reported by the services have been refined and changed over the years to improve the credibility of the data for use as an indicator of real property condition. DOD's current definition of BMAR, which was revised in August 1973, states that

"The Backlog of Maintenance and Repair (BMAR) is the end of fiscal year measurement of maintenance and repair work remaining as a firm requirement of the installation work plans \* \* \* but which lack of resources prohibit accomplishment in that fiscal year."

Despite congressional actions and DOD's effort to improve the reporting of BMAR, DOD's reported backlog more than doubled from \$900 million in fiscal year 1973 to over \$2 billion in fiscal year 1978. This continued growth prompted the Senate Committee on Appropriations in its October 2, 1978, report (S. Rept. No. 95-1264, 95th Cong., 2d sess.) to ask us to review DOD's backlog program in phases over the next 2 to 3 years. In our report on the first

review phase (LCD-79-314, Aug. 31, 1979), we provided the Committee with a historical perspective on the backlog trends, DOD's management policies for identifying backlog, descriptions of the services' management systems for determining the backlog, and the results of previous internal reviews. Our report also showed that the backlog was being treated as a service problem rather than as a DOD problem. The difference between the various services' systems for managing backlog shows a need for more DOD central control and monitoring.

The following table shows the floor amounts, the military services' planned and actual expenditures, and reported BMAR for fiscal year 1979:

	<u>Army</u>	<u>Navy</u>	<u>Marine Corps</u>	<u>Air Force</u>	<u>Total</u>
	----- (millions) -----				
Planned expenditures	\$ 578.1	\$378.4	\$113.9	\$635.3	\$1,705.7
Maintenance floor	580.2	380.3	107.5	592.2	1,660.2
Actual expenditures	679.0	436.9	122.9	730.9	1,969.7
Reported BMAR	1,309.2	563.0	139.0	365.5	2,376.7

#### OBJECTIVES, SCOPE, AND METHODOLOGY

In this second review phase of DOD's backlog program, we assessed the validity of the reported BMAR, the uniformity of the services' interpretation of DOD's definition and guidance on the reporting of BMAR, the adequacy of the manageable levels established by the services through their application at the commands and installations, and the management of operation and maintenance funds applied to maintenance and repair projects and the reduction of BMAR at the installation level.

We reviewed DOD policies and procedural guidance provided to the services and related Army, Navy, Marine Corps and Air Force regulations, directives, and records. Also, we discussed BMAR policies and procedures with key officials at headquarters, intermediate commands, and installations. Our examination included 4 intermediate commands and 13 installations and covered the fiscal years 1978-79 BMARs. We selected the above installations and commands to provide for coverage within all military services and to evaluate the command/installation relationship for installations with significant levels of backlog. Since our selection was not made on a statistical sample basis, the results cannot be projected DOD-wide. However, we have no

reason to believe our results are not indicative of the situation existing at other locations. The commands and installations included in our review and the BMARs reported are shown in appendix I. Below is a summary of the reported BMARs for the commands and installations covered in our review.

	<u>FY 1978</u>	<u>FY 1979</u>
	----- (millions) -----	
Intermediate commands	\$455.4	\$482.4
Installations	114.4	135.1

## CHAPTER 2

### DOD NEEDS TO ENSURE UNIFORM INTERPRETATION OF ITS BMAR DEFINITION BY THE SERVICES TO ELIMINATE CONSTRAINED BACKLOG REPORTING

The Congress is not receiving a true picture of DOD's BMAR. The reported BMAR has been constrained by certain services and is hundreds of millions of dollars greater than the reported level of real property maintenance and repair deficiencies. This constraint results primarily from inconsistencies in the services' systems for identifying and reporting BMAR on the basis of their interpretation of DOD's BMAR reporting requirements.

DOD's definition and instructions, which date back to 1973, specify that BMAR be the end-of-the-fiscal-year measurement of maintenance and repair work remaining as a firm requirement of an installation's work plans but not accomplished because of a lack of resources. DOD requires installations to prepare annual and long-range work plans which accurately portray unconstrained total maintenance and repair requirements for effectively managing real property. During April 1980 hearings before the Senate Committee on Appropriations, DOD said that it believed that the services agreed on the criteria and definition of BMAR. According to DOD, the small differences existing in BMAR reporting provide management the necessary flexibility for individual service mission responsibilities and systems. DOD did not consider these differences sufficiently significant to invalidate the backlog measurements.

However, we found that the Navy's and Air Force's systems do not conform to DOD guidance and significantly constrain the reported level of BMAR. For example:

- The Navy's BMAR system excludes a large portion of its total real property maintenance and repair deficiencies.
- The Air Force's system excludes a significant part of that backlog scheduled for commercial contract, as well as all backlog scheduled for its installations' in-house work force.

Generally, the Army and Marine Corps systems follow DOD's guidance for reporting backlog. However, actions taken by service commands and installations individually contributed to the constrained level of reported BMAR.

We believe DOD's failure to ensure proper, uniform interpretation of its definition and instructions for reporting BMAR greatly contributes to the constrained

reporting. According to DOD testimony on April 28, 1980, before the Senate Committee on Appropriations, a Real Property Maintenance Council in the Office of the Secretary of Defense provides a means of advocating uniform DOD policies and procedures. The Council, comprised of senior service program representatives, jointly provides a greater role in reviewing and evaluating program progress, making recommendations for improving management effectiveness, and promoting efficiency and economy by mutually exchanging ideas and techniques. DOD also referred to internal audits by service and Defense audit teams promulgating basic, broad policies and evaluating BMAR compilation and reporting.

However, DOD has not ensured that the services use uniform systems and procedures to report BMAR. The Real Property Maintenance Council has met sporadically and, in our opinion, has not effectively directed and overseen the BMAR reporting systems. As discussed in our previous report, 1/ Defense and service internal audit organizations have over the years reviewed the adequacy of the services' reported BMAR. However, as illustrated in the following segments of this chapter and chapter 3, we believe these reviews have had little impact on improving the quality of BMAR reported by the services.

NAVY'S REVISED SYSTEM FOR REPORTING  
BMAR EXCLUDES A MAJOR PORTION OF  
IDENTIFIED BACKLOG

The Navy's current system for classifying and reporting backlog significantly distorts its true BMAR level. As shown on page 6, the Navy has understated its BMAR by several hundred million dollars since fiscal year 1977, when it revised its system for reporting maintenance and repair backlog. The Navy's gross understatement in reporting, based on the actual level of backlog, resulted primarily because its BMAR system

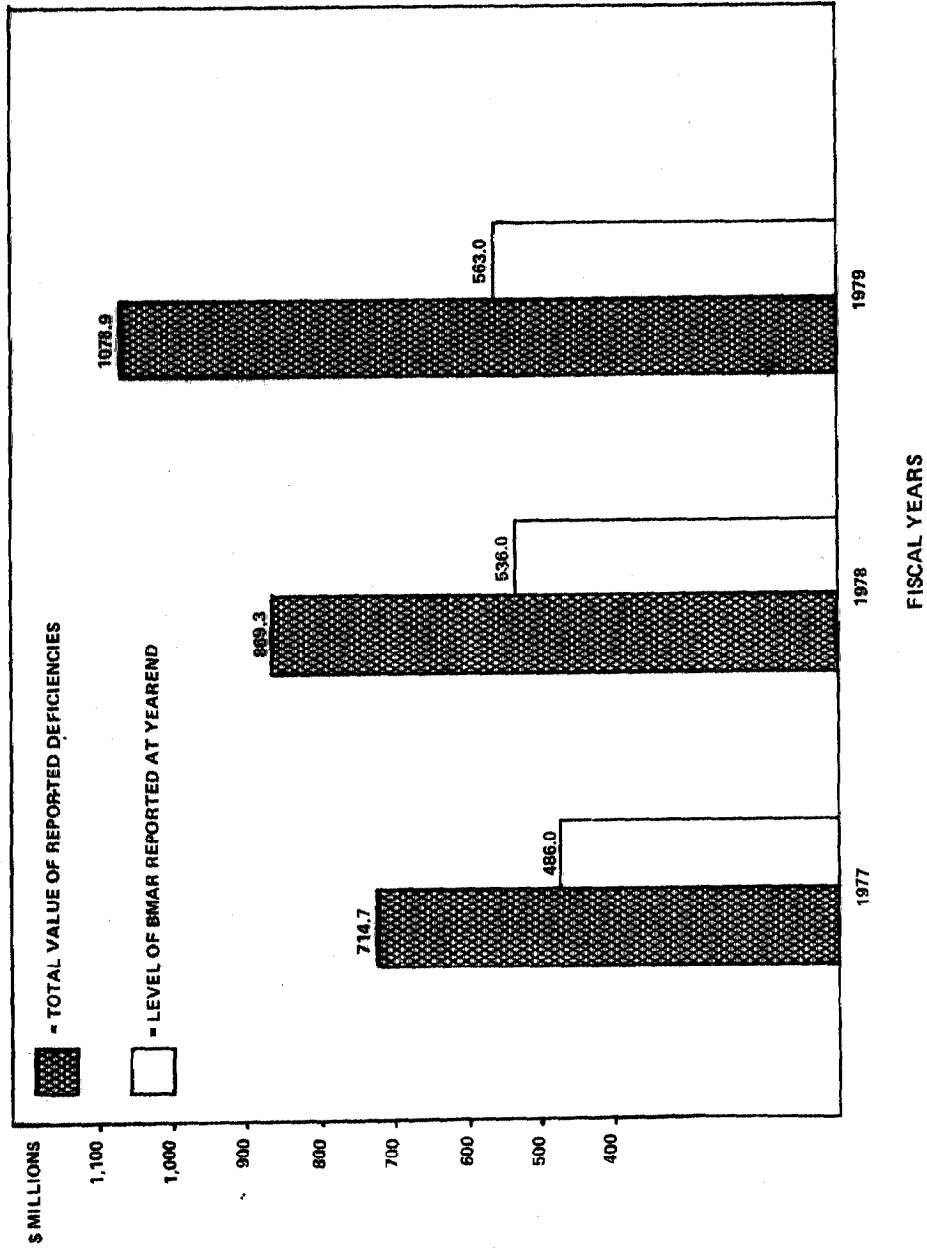
--uses only part of the total backlog as the basis  
for reporting BMAR and

--projects a yearend BMAR from deficiencies reported  
7 months earlier.

---

1/"DOD's Real Property Maintenance and Repair Backlog" (LCD-79-314, Aug. 31, 1979).

COMPARISON OF LEVEL OF BMAR REPORTED AT YEAREND  
WITH TOTAL VALUE OF DEFICIENCIES REPORTED BY  
NAVY INSTALLATIONS





The Navy's interpretation of DOD guidance understates backlog reporting

The system prescribed by the Chief of Naval Operations specifies that each installation prepare an annual inspection summary to reflect all known uncorrected facility deficiencies. The backlog is then determined by selecting from the summary only those deficiencies classified as nondeferrable. Non-deferrable deficiencies are defined as those which cannot be deferred beyond the current year because of operational needs or economic impact. Only nondeferrable deficiencies become the basis for BMAR. Deficiencies not considered urgent are classified as deferrable, and therefore, are excluded from the BMAR.

The Navy's system has resulted in its installations and commands classifying and reporting as nondeferrable only a part of the total known uncorrected real property maintenance and repair needs. As the following table shows, the Navy's reported backlog would be substantially greater had it reported all uncorrected facility deficiencies.

Comparison of the Values for Total Identified Real Property Deficiencies with Those Classified as Nondeferrable--1979

<u>Command</u>	<u>Total value of all identified deficiencies</u>	<u>Total value of nondeferrable deficiencies</u>	<u>Difference</u>
	----- (millions) -----		
Commander in Chief, U.S. Atlantic Fleet, Norfolk, Virginia	\$220.5	\$84.3	\$136.2
Chief of Naval Material, Washington, D.C.:	175.6	90.8	84.8
Naval Supply Systems Command, Washington, D.C. (note a)	88.3	49.0	39.3

a/Included in totals for Chief of Naval Material.

Our review of documentation for selected deficiencies at Navy installations visited showed that similar deficiencies could be reported as deferrable or nondeferrable. For example:

--At the Naval Station, Norfolk, Virginia, a March 1977 project provided for mechanical repairs to a correctional facility. Documentation showed that the facility had plumbing problems which caused unsanitary conditions and extreme health hazards. This project, estimated at \$42,000, was given a low priority and reported in 1979 as deferrable.

--At the Naval Supply Center, San Diego, California, a plumbing repair project for a headquarters facility was estimated at \$156,000. This project was reported in 1979 as nondeferrable.

--At the Norfolk Naval Supply Center, projects to repair or replace roofs were designated as both deferrable and nondeferrable.

As shown above, the Chief of Naval Operations had not provided adequate guidance on how to classify projects as deferrable and nondeferrable. As a result, each command had different procedures for classifying projects, and individual judgment was a major factor in classification decisions. Personnel at the installations audited either could not address what was considered a deferrable or nondeferrable project or gave differing interpretations of the Navy's nondeferrable criteria.

During our review, the Navy revised its guidance to improve criteria on classifying real property deficiencies as nondeferrable. Although the guidance is more specific, in our opinion, it still does not clarify what constitutes a deferrable project which should not be reported as BMAR. In fact, the revised Navy guidance explicitly states that the nondeferrable deficiencies used for reporting BMAR represent only part of the total backlog of real property maintenance and repair needs.

We believe that the Navy should report all known uncorrected real property deficiencies, deferrable and nondeferrable, as BMAR. Otherwise, DOD and the Congress, when making program decisions, will not have a true picture of the Navy's backlog.

Navy's projection of yearend  
BMAR also understated the level  
of reported backlog

The Navy's level of reported BMAR has also been understated because the backlog has consisted of an estimate based on adjustments to the actual known deficiencies reported as nondeferrable 7 months earlier. Each year,

Navy installations report their uncorrected facility deficiencies as of March 1; the major commands then adjust these figures to estimate the BMAR for the end of the fiscal year. The Comptroller of the Navy prescribed the use of a formula to project yearend BMAR which could have resulted in either an overstatement or understatement of the backlog. As shown below, the 1979 yearend projection for two commands audited further understated the level of reported BMAR.

Comparison of Reported Nondeferrable  
Deficiencies and Projected Yearend BMAR  
for Two Major Commands in 1979

<u>Command</u>	Total value of reported nondeferrable deficiencies as of March 1	Projected yearend BMAR	<u>Difference</u>
------(millions)-----			
Commander in Chief, U.S. Atlantic Fleet	\$84.3	\$76.4	\$ 7.9
Chief of Naval Material	90.8	77.1	13.7

The adjustments made to estimate BMAR, based on the installations' nondeferrable deficiencies, thus serve to further diminish the level of reported BMAR.

The Navy recognized the need to correct this deficient reporting approach. Therefore, on January 16, 1980, the Navy directed its installations to report uncorrected facility deficiencies as of the end of the year, beginning in fiscal year 1981. Although this would appear to eliminate adjustments and provide a more accurate BMAR picture, the procedures for classifying deficiencies as deferrable, as well as the actions of local commands, will continue to distort the reported BMAR. For example, the Commander in Chief, U.S. Atlantic Fleet, instructed its installations to retain the March 1 reporting date and provide information by the following October 15 to reflect newly identified or funded projects for March 1 through October 1. However, the command's guidance does not require project updates to reflect increased deterioration and price escalation. Under the current system, the cost of some projects may be estimated as much as 19 months before the end of the fiscal year.

AIR FORCE SYSTEM FOR REPORTING BMAR  
EXCLUDES MAJOR PORTIONS OF THE BACKLOG

The level of BMAR reported by the Air Force is also significantly constrained. Similar to the Navy and contrary to DOD instructions, the Air Force does not report the backlog on the basis of unconstrained total requirements. The Air Force has limited the reporting of BMAR, understating its actual level of backlog by millions of dollars because its BMAR reporting system

- includes only part of the backlog of real property maintenance and repair deficiencies planned for commercial contract and
- excludes that backlog programmed for the in-house labor force.

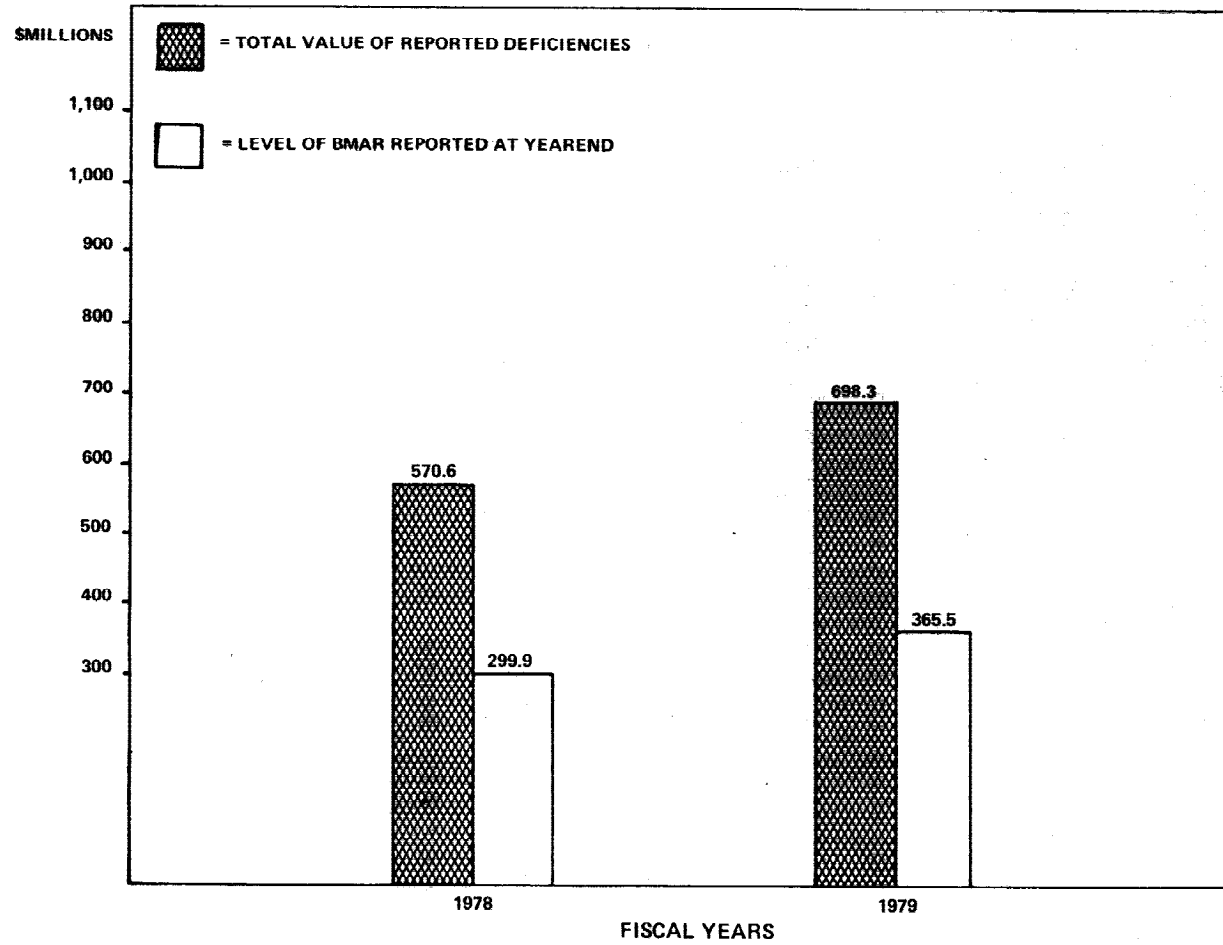
We believe the Air Force should revise its system so that its installations report all unfunded maintenance and repair deficiencies remaining as firm requirements at yearend. Otherwise, Air Force headquarters, DOD, and the Congress will not have a true picture of the Air Force's backlog.

Air Force BMAR reports include  
only certain facility deficiencies  
to be corrected by commercial contracts

The Air Force system for reporting BMAR does not include all of the backlogged maintenance and repair to be contracted commercially. The Air Force designed this system to provide monthly reports on the status of unfunded contract projects. However, the Air Force limits its "backlog" to those contract projects planned for the current or prior year(s) but still unfunded at yearend. Because it identifies projects to be programmed for 2 succeeding years and does not designate and report them as BMAR, the Air Force significantly understates its deficiencies at yearend. As shown on page 11, the Air Force understated its BMAR by about \$270 to \$330 million at the end of fiscal years 1978 and 1979.

The Air Force has an automated maintenance, repair, and minor construction reporting system which depicts the current status of planned contract projects. According to its latest (Aug. 1976) guidance, the system processes monthly reports from installations to major commands and headquarters. These reports identify the backlog of maintenance and repair which the Air Force uses to support its budget estimates and financial plans.

COMPARISON OF LEVEL OF BMAR REPORTED AT YEAREND  
WITH TOTAL VALUE OF DEFICIENCIES REPORTED BY  
AIR FORCE INSTALLATIONS



Projects included in this system are based on documented work requirements which the installations' facilities boards have validated for contract. These validated, unfunded deficiencies enter the reporting system with a project number which designates them for accomplishment in either the current year or 1 of 2 succeeding years. Those designated for accomplishment in either of the 2 succeeding years are termed "future requirements." At yearend, the installation identifies and codes those projects to be reported as BMAR. Because the Air Force limits backlog to those unfunded projects designated to be accomplished in current or prior years, projects designated as future requirements are not reported as BMAR. As shown below, the Air Force Command and installations we visited were not reporting a large portion of their backlog to be accomplished commercially.

Comparison of Total Requirements to be  
Performed by Commercial Contract with  
Reported BMAR for FY 1979

<u>Command/installation</u>	<u>Total require- ments</u>	<u>Reported BMAR</u>	<u>Differ- ence</u>	<u>Percent unreported</u>
	----- (millions) -----			
Tactical Air Command, Langley, Virginia:	\$121.1	\$80.9	\$40.2	33
Langley Air Force Base, Langley, Virginia (note a)	10.3	7.6	2.7	26
Nellis Air Force Base, Las Vegas, Nevada (note a)	8.9	6.6	2.3	26
Shaw Air Force Base, Sumter, South Carolina (note a)	6.2	5.1	1.1	18

a/Figures are included in totals for Tactical Air Command.

Our review of selected installation projects showed that deficiencies designated as future requirements were similar to those reported as BMAR. For example:

--A Langley Air Force Base project to replace a chapel's heating and air-conditioning system for an estimated \$40,000 was designated a future requirement and excluded from BMAR. The system is beyond serviceable repair and is deteriorating.

--Another Langley project to replace the heating and cooling systems in two buildings for an estimated \$40,500 was reported as BMAR.

--A Nellis Air Force Base project to repair gas leaks for an estimated \$35,000 was designated a future requirement and excluded from BMAR.

In October 1979 the Air Force revised its automated system for reporting projects to be contracted. Although data elements essentially are the same under both the previous and current systems, the previous system was off-line (punch cards), whereas the revised system is on-line. Other revisions include:

--Automatic identification and coding of BMAR projects.

--The ability of installation personnel to enter unvalidated projects into the system.

--The ability to add other engineering program elements.

According to Air Force officials, these revisions will not result in differences in BMAR reporting. Concerning the exclusion of projects designated as future requirements from the reported BMAR, an Air Force representative said that projects identified as future requirements are not considered BMAR but are considered to be those which will require work in subsequent years as determined by engineering judgment. Such projects are placed in an installation's work plan for outyear program requirements. Although we believe the concept of programing the deficiencies for accomplishment in future years is good management, we also believe that the deficiencies should be reported as BMAR to reflect an accurate picture of the total backlog.

Maintenance and repair backlog for in-house labor force is excluded from BMAR

The Air Force system also constrains the reporting of BMAR by excluding the backlog of maintenance and repairs scheduled for an installation's in-house work force which remains as unfunded firm requirements at yearend. While the amount of backlog for in-house work does not appear to be as significant as the unreported contract backlog, we believe that it could amount to several million dollars annually. For example:

--In a sample of 34 maintenance and repair work orders to be performed in-house at Shaw Air Force Base, 31 orders estimated at \$215,100 should have been reported as BMAR in fiscal year 1978.

--At Nellis Air Force Base, 11 unfunded in-house projects, estimated at \$42,316, should have been reported as BMAR at the end of fiscal year 1979.

Air Force officials told us that the yearend in-house backlog is not reported because it is not programmed sufficiently in advance to develop a realistic backlog figure; such backlogs ultimately are accomplished in subsequent years. However, we believe this rationale is insufficient justification for omitting the in-house backlogs from BMAR reports. In our opinion, identifying and accumulating such backlog at yearend for inclusion in the Air Force report would be a simple process.

LOCAL COMMAND AND INSTALLATION  
ACTIONS ALSO CONSTRAIN THE  
LEVEL OF REPORTED BMAR

The BMAR reported to DOD and the Congress is further understated by millions of dollars annually because certain Army and Navy commands and installations can arbitrarily reduce the level of deficiencies reported or disregard the regulations for reporting BMAR. For example:

- The Norfolk Naval Station arbitrarily reclassified 104 projects totaling an estimated \$702,000 from nondeferrable (the basis for reporting BMAR) to deferrable because personnel at the Commander in Chief, U.S. Atlantic Fleet, informally instructed its installations to reclassify some deficiencies. Atlantic Fleet command personnel called those instructions an "overreaction" to previous criticism from the higher command that too many deficiencies were being designated nondeferrable.
- Fort Bragg, North Carolina, in violation of Army regulations, excluded from its BMAR reports the backlog of maintenance and repair designated for the installation's in-house labor force. The amount of such work was estimated to be from \$50,000 to \$200,000 at any one time.
- Also in violation of Army regulations, Fort McPherson, Georgia, did not report as BMAR those projects with estimated costs under \$10,000. In fiscal year 1979, these unreported projects amounted to \$45,000.



### CHAPTER 3

#### DOD SHOULD IMPROVE THE MANAGEMENT OF ITS REPORTING SYSTEM TO PROVIDE A MORE RELIABLE BMAR

As discussed in chapter 2, the Congress cannot rely on the reported BMAR as an accurate and valid account of real property deficiencies because the services constrained the level of reported BMAR. In addition, several other problems in the military services' reporting systems have undermined the credibility of the reports and caused even further understatement of reported BMAR.

- Facility inspection programs do not ensure that all deficiencies are identified for reporting.
- Installations do not consistently follow DOD's requirement for BMAR to be identified from installation work plans.
- Cost estimates for reported deficiencies are not adequately developed and are not updated to reflect increased deterioration and price escalation.
- Insufficient review of the BMAR has resulted in questionable adjustments to the BMAR reported by certain installations and commands and many inconsistencies and errors in the data reported.

We believe these problems have resulted from DOD's decentralized management approach and a general lack of adequate review and validation of the systems and BMAR data. During April 28, 1980, testimony before the Senate Committee on Appropriations, DOD said it had considered alternatives to the current approach for management of real property, including the reporting of BMAR by the services. DOD stated that, in past years, a large staff within the Office of the Secretary of Defense exercised more central control over the real property maintenance program and imposed detailed procedures with specific approval for funding thresholds. According to DOD's testimony (1) subsequent reorganizations to improve overall management and mission structure delegated more authority to operating levels with top management surveillance of programs and (2) a minimum Office of the Secretary of Defense staff function currently provides basic policies and program oversight. DOD also stated that it considers coordination and constant contact with service representatives at the functional program level and through the Real Property Maintenance Council acceptable program direction and control.

However, we found that DOD's policy of allowing each service to develop its own criteria and system for reporting BMAR and the limited program oversight by DOD and the services have led to many inconsistencies among the services' BMAR systems and procedures. Sometimes, inconsistencies among installations have occurred within the same service. As noted earlier, DOD told the Senate Committee on Appropriations that it did not consider these differences to be sufficiently significant to invalidate the backlog measurements. However, we consider the accuracy and validity of the reported BMAR to be highly questionable.

#### INADEQUATE FACILITY INSPECTION TO IDENTIFY DEFICIENCIES

DOD cannot be sure that all real property deficiencies are identified for reporting as BMAR because the services' requirements for routine recurring inspections of facilities generally were not adequately administered at the installations audited. Each military service requires its installations to inspect facilities and report on the results according to its guidelines. However, the services lack controls to ensure that thorough inspections are performed on schedule, thus raising serious questions about the credibility of the services' reported BMAR in fiscal years 1978 and 1979.

All of the 13 installations we reviewed had programs for routine recurring inspections, but only 2 were adequately performing inspections in accordance with their service requirements. The reported BMAR for fiscal years 1978 and 1979 was understated because the installations either did not have fully ongoing programs then or did not have adequate inspection programs. For example:

- Generally, the Army installations had no ongoing inspection programs to identify facility deficiencies. Fort Ord, California, did not have an inspection program during fiscal year 1978, and Fort McPherson and Fort Stewart, Georgia, did not inspect facilities regularly. Also, Fort Bragg had not incorporated into the BMAR any facility inspection results since fiscal year 1976, when its BMAR increased from about \$6 to \$20 million, based on a 1-month comprehensive inspection during that year. The Army is implementing a new facility inspection program.
- Langley Air Force Base, for a period of time in 1978, also did not perform facility inspections as required by Air Force regulations. In addition, documentation generally was not available to show whether inspections had been performed in prior years. In 1979 Langley began reinstating its program to inspect facilities within the minimum frequencies prescribed by Air Force regulations.

--The Camp Pendleton, California, Marine Corps base lacked documentation to show whether facility inspections were performed in fiscal year 1978 or for 20 percent of its facilities in 1979, although annual inspections are required.

--Review of the records for about 10 percent of the Mayport, Florida, Naval Station facilities showed that about 20 percent had no inspection reports on file, although annual inspections are required.

While we did not specifically review the quality of inspections, we found that generally they were not sufficiently thorough in scope or adequately documented so that deficiencies could be identified for effectively reporting and managing backlog. For example:

--One Norfolk Naval Station project involved serious health hazards resulting from deteriorated asbestos insulation, which had fallen from steam pipes, and leaking sewer lines underneath a food service facility. The deficiencies were not detected until a special inspection was performed in December 1978 based on complaints of odors by building occupants. Yet a routine inspection by the Norfolk Navy Public Works Center, conducted only 3 months earlier, had not detected the deficiencies--although Naval Station officials admit it should have. The earlier report had not indicated any inspection or deficiencies underneath the building. This occurred despite a May 1977 inspection report, on file, which noted that insulation on certain pipes needed replacing and that part of the facility had not been inspected underneath because there were 2 to 6 inches of water standing. The naval station has requested emergency funding approval and is correcting the deficiencies.

--At Fort Bragg some deficiency descriptions in reports under its recently implemented inspection program were too vague to benefit BMAR managers, especially in determining whether the deficiency should be added to the BMAR list.

We believe the problems with installations' inspection programs stem from the lack of overall DOD guidance and oversight. Although each of the services has provided guidance for the facility inspection program, we believe the inconsistencies in requirements, such as the frequency of inspections, affect the level of deficiencies identified.

REQUIRED WORK PLANNING IS NOT  
ALWAYS USED AS A BASIS FOR  
REPORTING AND MANAGING BMAR

The installations we visited were not complying with DOD's requirements for work plans, thereby lessening the effectiveness of BMAR management. Generally, installations either did not observe the requirements that work plans form the basis for reporting BMAR or did not ensure that all facility deficiencies were included in their work plans. We believe this lack of adequate work plans impairs the services' and installations' management of the real property program and hampers backlog reduction efforts.

DOD requires each installation to develop annual and long-range work plans accurately portraying unconstrained total requirements for use in effectively managing real property. DOD also requires that BMAR be extracted from the installation work plans and represent the end-of-fiscal-year measurement of maintenance and repair work remaining as a firm requirement but not accomplished because of a lack of resources. However, the services' systems either do not require such plans or do not contain the controls needed to ensure that the work plans are adequate for use in reporting BMAR.

Eleven of the 13 installations audited did not prepare annual or long-range plans reflecting unconstrained total requirements. This was generally the case with the Navy and Air Force because their systems for reporting BMAR did not require BMAR to be extracted from such plans. Their reporting systems were based on either a facility inspection program or an automated reporting system which included only maintenance and repair projects to be contracted. Although the Army and Marine Corps systems required work plans to serve as the basis for BMAR, the plans were not always prepared or were inadequate for identifying and reporting BMAR. For example, Camp Pendleton did not prepare an annual work plan, and Fort Bragg prepared an annual work plan which served as the basis for the reported BMAR, but it did not include work to be performed by the in-house labor force.

We believe that DOD should require the military services to consistently apply its guidance and to ensure that adequate work plans serve as the basis for reporting BMAR and managing the real property program, with emphasis toward reducing the backlog. Further, work plans which do not consider unconstrained total requirements or reflect the best course of action to correct the maintenance and repair deficiencies, undoubtedly restrict the installation's ability to effectively plan and manage its real property program. The lack of adequate work plans, as it relates to the installation's application of maintenance and repair funds, is further discussed on pages 27 and 28.

INADEQUATE AND OUTDATED COST  
ESTIMATES FURTHER AFFECT THE  
CREDIBILITY OF REPORTED BMAR

The reported BMAR is also understated and its credibility made questionable because the services have not ensured accurate, current cost estimates for the maintenance and repair projects. We believe this failure to develop adequate cost estimates for BMAR projects and to keep them up-to-date results from a lack of sufficient guidance and controls over BMAR reporting. At each installation visited, we found many cost estimates for projects which either differed significantly from the actual costs when funded or had not been updated to reflect increased deterioration and price escalation.

DOD directives stress the importance of accurately reflecting work requirements. However, the services have not issued adequate instructions on developing and updating cost estimates to consistently carry out DOD guidance. The Navy has provided specific guidance for developing cost estimates using work standards and other estimating guides and requires that cost estimates be current. The Air Force regulations, however, specify only the use of minimal data and the most current cost estimate available for validating and reporting work projects. In addition, Air Force regulations specifically state that projects will be based on costs current at the time they are submitted to Air Force headquarters for approval. Army guidance stated that maintenance and repair requirements should be kept current at all times but did not specify how the cost estimates should be updated.

Inadequate or outdated cost estimates for BMAR projects are a consistent problem. The estimates are often preliminary or rough estimates of the cost for the work, and, where updated for price escalation, the revised estimates do not always consider increased facility deterioration. We found significant differences between the actual costs for some recently funded projects and BMAR report cost estimates. In addition, many cost estimates currently reported had not been updated to reflect increased deterioration and price escalation. For example:

- The cost estimates reported for 26 BMAR projects reviewed at the Parris Island, South Carolina, Marine Corps Recruit Depot were understated by a net amount of almost \$800,000 compared to the actual costs.
- The cost estimates for several BMAR projects reported in 1979 by the Mayport Naval Station had not been updated since 1976 or 1977.

- One BMAR project at the Nellis Air Force Base to replace a hospital roof was estimated in fiscal year 1975 at \$176,000. It was funded in fiscal year 1979 for \$325,700, or a difference of \$149,700.
- The cost estimates for BMAR projects at Fort McPherson and Fort Stewart were desk estimates made by planners and estimators, and generally, were not updated until the projects were ready to be accomplished. Some currently reported projects at these installations dated back to 1974 and 1976.

We believe that DOD and the services must provide better guidance and establish necessary controls to ensure that adequately prepared cost estimates, routinely updated for increased facility deterioration and price escalation, are used in reporting BMAR. Otherwise, the reported BMAR will not accurately reflect the amount of backlog existing at the installations.

INSUFFICIENT REVIEW AND  
VALIDATION OF BMAR AFFECT  
ITS ACCURACY AND VALIDITY

Insufficient review and validation of the installations' backlogs also affect the accuracy and validity of the reported BMAR. Although DOD and the services generally have stressed the need for a BMAR review, we found that their limited effort to validate the backlog does not ensure a credible BMAR. In addition to problems with the installations' inspection programs, work plans, and project estimating noted earlier in this chapter, the inadequate review and validation have resulted in (1) omission of projects from the BMAR reports and the reporting of erroneous, inconsistent data and (2) arbitrary and unexplainable adjustments to the installations' backlog reports.

DOD has directed that Office of the Secretary of Defense officials will visit installations to review real property management, including specific repair projects in the backlog, and that all levels of organization and command will appraise effectiveness. The services have also given some guidance for reviewing and validating the backlog. Navy guidance states that the BMAR must withstand the scrutiny of intense review and that the applicable command must review and validate installation-reported backlog. Army regulations also provide for command evaluation of real property programs, and its Forces Command has requirements for validating BMAR projects. The Marine Corps has procedures for reviewing and validating BMAR

projects, and the Air Force requires that the BMAR program be monitored. However, the Air Force has not issued specific guidance on how BMAR is to be reviewed.

Although DOD's most recent study focused on the 1977 BMAR and each of the services was doing some review and validation of the backlog, we found various problems with the reported BMAR at several installations which had resulted from insufficient review efforts. For example:

- Inadequate command review of the Camp Pendleton BMAR resulted in two projects with a total estimated cost of \$368,700 being improperly added to the 1979 BMAR list. As a result, the projects were reported twice, and another project with a documented estimate of \$32,900 was incorrectly reported as estimated at \$329,000.
- Thirteen projects with total estimated costs of about \$1.4 million were omitted from Langley's 1978 BMAR report because, according to an Air Force representative, the projects were not properly identified as BMAR.
- At each Navy installation visited, some projects were inconsistently reported as nondeferrable in fiscal year 1978 but later classified and reported as deferrable in fiscal year 1979.
- At least five projects with total estimated costs of \$138,000 were not included in the March 1980 Forces Command validation of the Fort Ord BMAR projects for buildings and grounds because installation personnel had not provided the command with a list of all projects to be validated.

In addition to the problems associated with the installation's reporting of BMAR, inadequate review and oversight of the BMAR have resulted in arbitrary and unexplainable adjustments by the installations' commands and headquarters. For example:

- Army headquarters told us that it had adjusted the BMAR reported by Forces Command in fiscal year 1979 downward by \$8 million and that supporting documentation based on BMAR validation experience was supposed to be at the command. However, command personnel could not provide documentation or explanation to support these adjustments.

--The Naval Supply Systems Command made significant adjustments amounting to several million dollars-- both additions and decreases--to the backlog reported by its installations but could not provide documentation or explanation to support these adjustments.

We believe DOD and the military services need to improve their surveillance of the systems for reporting backlog to ensure that an accurate, valid level of BMAR is used for managing real property and reporting to the Congress.



## CHAPTER 4

### IMPROVEMENTS NEEDED IN THE MANAGEMENT OF REAL PROPERTY

#### MAINTENANCE AND REPAIR FUNDS

DOD has neither adequately defined a manageable level of BMAR nor effectively used backlog as an indicator of real property plant condition at commands and installations to ensure optimum use of available funds. The reported backlog--because it is not used as an indicator of plant condition--currently can be used only as a gross indicator on a trend basis to determine fluctuations in the total backlog. Although the service headquarters have established manageable levels for use in their planning and programing, the concepts are inconsistent and may not be meaningful for use in determining an acceptable real property plant condition. DOD also has not ensured that BMAR is adequately considered in the management and allocation of maintenance and repair funds at all organizational levels.

In addition, DOD recently has established separate categories within the base operating support program to give increased visibility and consistent treatment to the real property maintenance and repair effort. While the newly established program categories may provide for program visibility and appraisal for planning, programing, and budgeting, there is no assurance that DOD will be able to reduce the backlog or attain the congressional containment level. <sup>1/</sup>DOD has testified that, over the past several years, its planning guidance has attempted to arrest the growth of the backlog, but it has been unable to do so because higher priority requirements constrain the funding for real property backlog reduction. We believe that in addition to the program categories, DOD needs to recommend a meaningful maintenance floor of expenditures to the Congress which will cover the annual maintenance and repair requirements and provide for an adequately defined manageable level.

#### DOD NEEDS TO DEFINE A MANAGEABLE LEVEL OF BACKLOG

DOD has recognized the need for defining a manageable level of BMAR. Testifying before the Subcommittee on Defense, House Committee on Appropriations, on fiscal year 1979 appropriations, DOD said that the current program and fiscal guidance regarding a manageable level was to fund maintenance and

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<sup>1/</sup>The congressional conferees on the DOD appropriation bill for fiscal year 1979 adopted a policy that the backlog of maintenance and repair of real property should be held to the dollar level reported at the end of fiscal year 1978.

repair to (1) balance yearly requirements and (2) reduce outstanding deficiencies to a more manageable level in equal annual increments by the end of fiscal year 1984, except for the U.S. Army in Europe. Again, in March 1980 hearings before the Subcommittee on Military Construction, House Committee on Appropriations, on fiscal year 1981 appropriations, DOD stated that annual planning and programing guidance to the services for real property maintenance prescribed an approach. According to DOD, at the minimum level, funding should be programed to satisfy annual requirements and to allow no growth in the backlogs. At the basic and enhanced levels, the backlogs should be reduced to more cost effective manageable levels within 8 and 5 years, respectively.

DOD directives also provide that the effective management of real property maintenance activities requires planning of effort and programing of resources over the period of a 5-year defense plan. Further, the directives require that the planned level of effort be identified in the annual program objective memorandum of each service with an assessment of real property condition and the probable effect on the mission which would result from the funding level proposed over the period.

Although DOD has recognized the need for a manageable level of BMAR in funding real property maintenance, it has not defined a manageable level or provided such guidance to the services. In April 1980 DOD told the Senate Committee on Appropriations that elements of the Real Property Maintenance Council have discussed the goal of reaching a manageable level of backlog to allow effective management of in-house and contract resources and minimize physical plant deterioration. DOD further stated that, although the exact manageable level had not been defined, it will be defined when DOD is able to reduce existing backlog to the specified congressional containment level.

Regarding the council's discussions of the uniform use of a manageable level, service members' opinions differ widely on the makeup of a uniform level ranging from a zero level of backlog to an acceptance of the congressional guidance of containment at the fiscal year 1978 BMAR level as a management objective. As a result, a consensus was not reached and a position was supposed to be subsequently developed and provided to the services. At the completion of our review, DOD still had neither defined a manageable level nor provided such guidance to the services.

DOD's failure to define a manageable level and provide appropriate guidance has resulted in each service developing what it considers to be a manageable level. As shown on the next page, the services' concepts are inconsistent and may not be meaningful for use in effectively managing the program.

- The Army defines the level to be 20 percent of its annual maintenance and repair requirements. According to the Army, this concept provides for a reasonable level to be used in planning, programing, and budgeting and recognizes that facilities will be replaced and realined.
- The Navy defines the level as being equivalent to a zero balance of nondeferrable maintenance and repair deficiencies at the end of any given year. Non-deferrable deficiencies are those which cannot be deferred because of operational needs or adverse economic impact. We question this concept because the nondeferrable deficiencies are subjectively determined and could exclude some backlog which could be important in reaching an adequately defined manageable level.
- The Marine Corps defines the level as being equal to 1/2 of 1 percent of the real property current plant value.
- The Air Force defines the level to be between \$60 million to \$100 million in constant fiscal year 1979 dollars for maintenance and repair projects by contract. We question this concept because it applies only to the current Air Force concept of reporting BMAR which excludes a major portion of the total backlog.

As is apparent from the above, these concepts are inconsistent and only the Marine Corps relates its backlog to the real property it represents. Even if each service were to reach its level as currently defined, we believe there is no assurance that its real property plant would then be in an acceptable condition, or conversely, that overmaintenance of the plant would not have occurred. We believe that DOD should adequately define a manageable level for uniform use by all the services. Otherwise, DOD will not have an adequate program for managing real property and establishing goals for backlog reduction.

LACK OF GUIDANCE AT COMMAND AND INSTALLATION  
LEVELS ON USE OF BACKLOG IN MANAGEMENT OF FUNDS

DOD has not assured that BMAR is given adequate consideration in the management and allocation of maintenance and repair funds at all organizational levels. Although our review did not specifically address the appropriateness of the allocation and use of funds at the various commands, we

found strong indications that allocation and application of funds for real property maintenance and repair does not consider the BMAR or the relative needs of installations. The services have established manageable level concepts for use in planning and programing funds at service headquarters. However, the commands and installations were not always aware of the manageable level concepts and had not received guidance on how to use backlog data.

Generally, installation managers were not aware of the manageable level concepts within their own service or of those in the other services. Command-level officials were more likely to be aware of a manageable level concept but not necessarily through official guidance. For example, managers at Commander in Chief, U.S. Atlantic Fleet, had not received any guidance regarding what the Navy considers to be a manageable level of BMAR. A command official told us that he did not believe that the Navy's concept of a zero manageable level could be obtained for all classifications of real property.

Because installation managers were not aware of the concepts or any guidance on how the manageable levels were derived, they could not comment on the adequacy of the levels for application at their installations. For example, personnel at Nellis Air Force Base were not aware of how a BMAR manageable level could be computed or whether the Tactical Air Command or Air Force headquarters had computed a manageable level applicable to the base.

Testifying before the Senate Committee on Appropriations in April 1980, DOD said that it provides annual and programing guidance which specifically prescribes the factors for placing priority on maintenance and repair projects for funding. DOD stated that maintenance projects must meet one or more of the following criteria: improve readiness, eliminate safety and health deficiencies, be cost effective, provide required mission support, or meet statutory deadlines or local environmental standards. DOD also stated that first priority is to be given projects directly influencing operational readiness of combat forces. Further, according to DOD, the basic policies and objectives include maintaining and repairing, in the most cost effective manner, all active real property to a standard which will permit continued use for designated purposes.

Our review at the commands and installations disclosed that the above criteria generally were considered in placing priority on maintenance and repair projects for funding. However, at the service command level, managers generally did not consider BMAR in the management of available maintenance

and repair funds. The Army's Forces Command established BMAR expenditure targets and earmarked funds specifically for backlog projects. Although funds were normally spent in excess of the BMAR targets, Forces Command officials stated that such action was not sufficient to contain the growth of BMAR. However, other commands did not place the same emphasis on BMAR. For example:

--The Tactical Air Command did not earmark funds for BMAR and funded about the same number of maintenance and repair projects for each of its installations considering only the 15 or 20 projects submitted by each installation. The command did not consider the installations' relative funding needs on the basis of their total backlog and real property plant condition. Command officials do not believe the reported BMAR alone indicates real property plant condition.

--The Commander in Chief, U.S. Atlantic Fleet, had developed a facility condition index to evaluate the relative condition of its facilities by classification. However, the facility condition index was not used to reflect the relative condition of real property at installations within the command. Also, the command did not earmark funds for BMAR.

The situation was similar at the installations. We found that certain installations were giving some consideration to backlog reduction when funding maintenance and repair projects. However, the majority of installations reviewed gave little or no consideration to BMAR in the management of their maintenance and repair funds. For example:

--The Norfolk Naval Station's budget contained an exhibit listing backlog projects for priority reduction of BMAR, and the known maintenance and repair projects were periodically listed in priority order to inform the installation's commanding officer of the existing deficiencies. However, maintenance and repair projects were sporadically selected for funding during the year without the benefit of formal annual and long-range work plans or consideration of the projects listed in the budget for priority reduction of BMAR. The station could not identify what the current level of BMAR meant in terms of real property plant condition. Naval Station officials said they would have to review and evaluate the real property maintenance and repair backlog trend over the past 3 years to provide any meaningful assessment of BMAR as an indicator of plant condition.

--A Fort Bragg official told us that the backlog data is not used in routine decisionmaking processes related to the real property program or as an indicator of the real property plant condition. However, the data is used to justify funds requests. He said that Fort Bragg's primary involvement with the BMAR is to satisfy the institutional requirement for reporting the backlog.

--At Camp Pendleton, we were told that the Marine Corps had not given base maintenance staff any guidance on using BMAR data in real property management. Nor had base maintenance staff established the use of BMAR data in managing real property. In fact, BMAR data was not used in funding or scheduling projects controlled by the staff.

We believe that DOD and the services need to ensure that the services' commands and installations adequately consider backlog in allocating and applying maintenance and repair funds. This consideration should include guidance on the uses to be made of the BMAR data and a better indicator of installation plant condition along with what is considered a manageable level of BMAR for use in determining relative funding needs. Otherwise, the commands and installations will not effectively consider the BMAR data in the overall management of the program and place emphasis on containing or reducing the backlog.

DOD AND THE CONGRESS CAN USE THE  
MAINTENANCE FLOOR TO REDUCE BACKLOG

Recently, DOD has set up program elements for real property maintenance activities. These program elements are being used this year and are supposed to enhance inter-service data consistency, uniformity, and overall program surveillance and monitorship. Since these elements have been established recently, we did not address them in our review. However, we believe that, in addition to the program elements, DOD needs to effectively consider the need to recommend a meaningful maintenance floor of expenditures which will cover the annual maintenance and repair requirements and provide for an adequately defined manageable level. In this respect, the floor would then be an effective mechanism that DOD and the Congress could use in reducing the BMAR. A defined manageable level would also establish the adequacy of the containment level. DOD cannot be sure that the manageable level will be equal to or lower than the specified containment level.

In our August 31, 1979, report, we discussed the establishment of the statutory real property maintenance floor. The Congress established the floor to ensure sufficient expenditures on real property maintenance to prevent excessive real property deterioration. The report showed that, although expenditures over a period of time had exceeded both the floor and the planned program expenditures, the services' total maintenance and repair requirements had not been met. The floor, as currently used, is related not to total requirements but to a planned expenditure level which is constrained by budgetary decisions. Consequently, it is ineffective in controlling backlog growth.

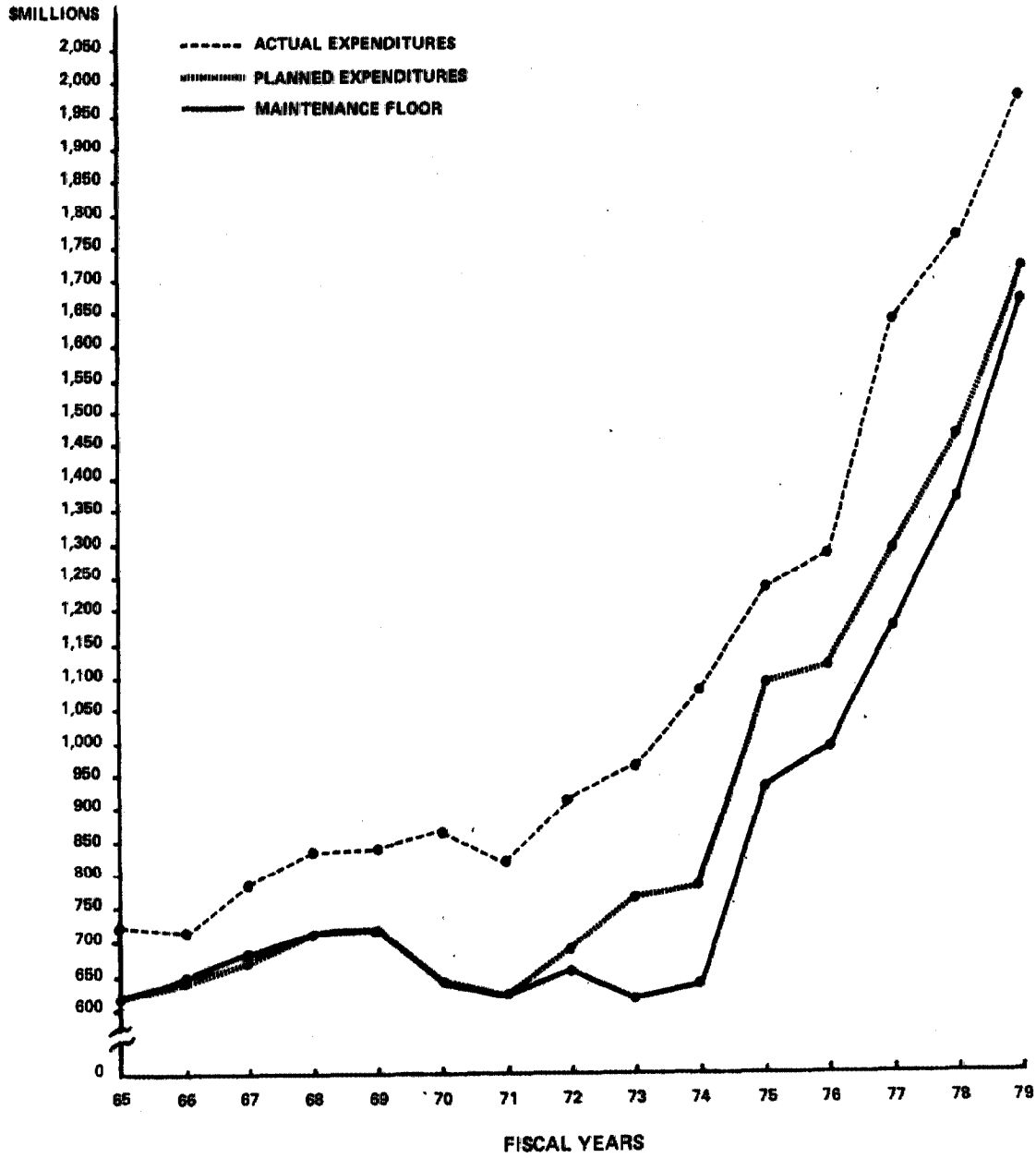
Because of the continuing growth of the backlog, the Congress directed that the 1978 backlog become a baseline and not be exceeded in the future. In response to a question on actions taken to achieve BMAR target levels, DOD testified before the Senate Committee on Appropriations in April 1980 that, over the past years, programs had been planned to arrest the growth of backlog and to achieve proper maintenance goals. DOD also stated that the optimum objective for real property maintenance and repair would be to reduce the backlog to a lower, more cost effective management level. Further, DOD stated that higher priority requirements placed constraints on such funding and that attainment of the real property maintenance objectives to first reduce the backlog to the congressionally directed 1978 level and then to the manageable level is expected to be influenced by competing Defense programs and future year resources available to DOD. In addition, DOD testified that it did not set aside funds specifically for reducing the maintenance and repair backlog. While we agree that funding constraints and competing demands will have some impact on DOD's ability to reduce the BMAR, we believe that DOD must effectively use the BMAR data and the maintenance floor to develop a program directed toward BMAR reduction. DOD has not defined a manageable level of BMAR and does not know how such a level would equate to the congressionally mandated containment level. Therefore, we question DOD's approach in attempting to reach the containment level without knowing whether it is actually greater than the manageable level. We believe that DOD should define an adequate manageable level which can be used to more effectively manage the program.

In this respect, an effective use of the floor would be to set it at an amount which would cover the annual requirements and which would consider the defined manageable level of BMAR. This would have the effect of preventing real growth in the backlog. In the past, DOD has resisted establishing a maintenance floor equal to the programmed

expenditures on the basis that needed flexibility in resource application would be taken away from program managers. As shown on page 31, however, DOD's expenditures in the real property maintenance area consistently have exceeded both the established floor and the planned level of expenditures. Had the floor been set in an amount to equal the planned expenditures from 1965 through 1979, it would have been exceeded in virtually all of these 15 years.



**GRAPHIC COMPARISON OF ACTUAL AND PLANNED  
EXPENDITURES AND MAINTENANCE FLOOR  
FISCAL YEARS 1965-1979  
DOD**



## CHAPTER 5

### CONCLUSIONS, RECOMMENDATIONS, AND AGENCY

#### COMMENTS AND OUR EVALUATION

##### CONCLUSIONS

The Congress should not rely on the backlog data reported by DOD and the military services. The reported backlog is grossly understated and the credibility of its underlying data is highly questionable. The level of reported BMAR has been constrained and is hundreds of millions of dollars less than the actual level of maintenance and repair deficiencies. We believe that DOD's failure to ensure uniform interpretation of its definition and instructions by the military services and to maintain sufficient control over the reporting of backlog has resulted in the military services reporting only a part of their backlog.

The military services' reported BMAR is understated further and its credibility undermined because several problems exist in the management of the services' systems for reporting backlog. We believe that the lack of sufficient program oversight by DOD and the services has resulted in such problems as inadequate facility inspection programs, deficient work plans, and inadequate and outdated BMAR cost estimates.

DOD has not effectively managed its real property program and BMAR. DOD has neither developed an adequate definition of what a manageable or acceptable level of backlog should be nor defined how the services and their commands and installations should use BMAR data in management decisionmaking processes. A proper manageable level of backlog becomes an important factor in determining the funding required to maintain a BMAR level which can be prudently carried without resulting in unacceptable plant deterioration. The headquarters levels of the various services, each establishing its own concept, now devote time and effort in the area of manageable levels. We believe that DOD's failure to define a manageable level and to provide guidance for its uniform use has resulted in significant inconsistencies in the military services' concepts. These concepts are of questionable value as tools for BMAR management.

DOD needs to take a more systematic approach to the management of funds for real property maintenance and repair. We believe that DOD's failure to provide adequate guidance for use of the backlog data by the military services and their commands and installations has resulted in little consideration being given to the backlog in funding decisions. DOD recently established separate

program elements to provide increased visibility and consistent treatment to the program. However, this action will not (1) ensure that commands and installations adequately consider the backlog in their allocation and application of available maintenance and repair funds or (2) eliminate the need to establish an adequate maintenance floor which considers the annual maintenance and repair requirements coupled with a defined manageable level of backlog.

The statutory maintenance floor (minimum of dollars to be obligated annually for real property maintenance and repair), as currently used, is not meaningful or effective in checking BMAR growth because it is not related to unconstrained total requirements. The maintenance floor is applied against a planned expenditure level which is constrained by budgetary procedures. DOD has resisted a higher maintenance floor maintaining that it would reduce the flexibility needed in applying resources for optimum mission accomplishment. However, historically, the annual expenditures in this area have exceeded not only the established floor but also DOD's planned expenditures. We believe that DOD and the Congress should work toward establishing a more realistic maintenance floor which covers the annual maintenance and repair requirements and considers an adequately defined manageable level of BMAR.

#### RECOMMENDATIONS

To ensure that DOD and the Congress receive accurate and valid information reflecting the true level of backlog, we recommend that the Secretary of Defense:

- Require the military services to modify their systems where necessary and implement controls to ensure that the services uniformly interpret the definition and instructions for reporting backlog.
- Report DOD's unconstrained total requirements in the Department's annual budget presentation to provide increased visibility in the area of real property maintenance and repair.
- Require the services to improve their inspections and planning to ensure that maintenance and repair project identification is complete and that projects are validated and based on adequately derived and current cost estimates.

To improve the overall management of DOD's backlog, with a view toward its reduction, we recommend that the Secretary of Defense:

- Establish and issue criteria to be used by the services in determining manageable or acceptable levels of maintenance backlog.
- Issue guidance to provide that the defined manageable level be uniformly used by all the military services in evaluating relative plant condition and the adequacy and effectiveness of funding decisions related to real property.

#### AGENCY COMMENTS AND OUR EVALUATION

DOD generally agreed that some problems exist regarding reporting of the BMAR. DOD said that, although BMAR is intended to be a constrained statistic, our report notes varying degrees of interpretation of the DOD guidance. According to DOD, action will be taken to correct this problem and to develop and issue a definition of manageable level.

DOD also said that even though a manageable level of BMAR has not been uniformly defined, the services and DOD consider the BMAR statistic in programing and budgeting decisions. We recognize that DOD and service headquarters levels do attempt to consider BMAR in the program objective memorandum aspects of budget preparation. However, in our opinion, this consideration would be much more meaningful if it were based upon an adequately defined manageable level of BMAR. This condition will remain until a meaningful manageable level is defined and implemented at all service levels of command. DOD has indicated that guidance on a uniformly defined manageable level will be provided.

With one exception, DOD agreed with our recommendations and said that it will take the necessary steps to implement the recommendations. DOD did not agree that it should report unconstrained total requirements in its annual budget presentation.

DOD said BMAR is intended to be a high priority, essential list of deficiencies and that reporting unconstrained total deficiencies would require additional personnel and an increased administrative workload. DOD further stated that unconstrained backlog reporting would not be as meaningful or effective in making resource decisions.

We believe that DOD's intended action to identify high priority, essential backlog projects is good management and beneficial for immediate budget decisions and short-term program management. Such actions to identify high priority urgent needs are already being accomplished by some installations through their efforts to place priority on identified backlog maintenance projects. However, reporting the total backlog should not require a significant amount of additional personnel or significantly increase administrative workload because the services already have mechanisms for identifying the total backlog. We believe that total backlog must be reported and used to ensure effective long-term program management by DOD and the Congress. Without the reporting of a total backlog and its consideration in the development of a manageable backlog level, neither DOD nor the Congress will have an adequate basis for effective management decisionmaking processes directed toward BMAR reduction.

In view of the continuing interest by congressional committees in the growing backlog, we still believe that, unless DOD can reach agreement with the committees that full disclosure is not required, it should report total backlog to the Congress and consider it in developing a meaningful manageable level.

Further, DOD must develop adequate criteria to ensure that BMAR reporting is uniformly accomplished by the services. Guidance should provide for the uses to be made of BMAR data in conjunction with plant condition indicators and an adequately defined manageable level for use in determining relative funding needs. DOD must also take steps to ensure that the services are correctly reporting the BMAR. Implementing this approach would eliminate the inconsistent treatment of BMAR by the military services and provide for the needs of effective long-term program management.

LIST OF COMMANDS AND INSTALLATIONSINCLUDED IN OUR REVIEW

	<u>Reported backlog</u>	
	<u>FY 1978</u>	<u>FY 1979</u>
	----- (millions) -----	
<u>Department of the Army</u>		
U.S. Army Forces Command Headquarters (Fort McPherson, Georgia)	\$206.3	\$248.0
Fort McPherson, Georgia	6.4	11.9
Fort Stewart, Georgia	2.9	3.2
Fort Bragg, North Carolina	24.5	34.5
Fort Ord, California	11.4	8.4
<u>Department of the Navy (note a)</u>		
Atlantic Fleet Headquarters (Norfolk, Virginia)	88.0	76.4
Norfolk Naval Station, Virginia	7.5	6.5
Mayport Naval Station, Florida	5.4	6.9
Naval Material Command Headquarters (Washington, D.C.)	91.1	77.1
Naval Supply Center, San Diego, California	2.9	2.8
Naval Supply Center, Norfolk, Virginia	21.3	21.2

a/At the time of our review, the backlog applicable to installations at the end of the fiscal year was not reported at the end of the year. The backlog shown for the installations is as of March 1 for each fiscal year.

	Reported backlog	
	<u>FY 1978</u>	<u>FY 1979</u>
	----- (millions) -----	
<u>U.S. Marine Corps (note a)</u>		
Camp Pendleton, California	\$10.8	\$14.1
Marine Corps Recruit Depot, Parris Island, South Carolina	5.1	6.3
<u>Department of the Air Force</u>		
Tactical Air Command Headquarters (Hampton, Virginia)	70.0	80.9
Langley Air Force Base, Virginia	4.1	7.6
Nellis Air Force Base, Nevada	5.0	6.6
Shaw Air Force Base, South Carolina	7.1	5.1

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a/Marine Corps activities report backlog directly to Marine Corps headquarters and not through an intermediate command.



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WASHINGTON DC 20301

NOV. 24, 1980

Mr. R. W. Gutmann  
Director, Logistics and  
Communications Division  
U.S. General Accounting Office  
Washington, D.C. 20548

Dear Mr. Gutmann:

This is in response to your letter of 20 October 1980 to the Secretary of Defense forwarding copies of the draft report, "DOD Needs to Better Manage Its Program for Reducing the Real Property Maintenance and Repair Backlog" (OSD Case #5555, GAO Code 945388).

The draft report has been reviewed by this office and the military services. Comments resulting from these reviews are enclosed.

We appreciate the opportunity to review and comment on the draft report. The information presented therein will be helpful in our efforts to improve the management efficiency of the Department of Defense program to identify maintenance deficiencies and program and budget resources for their correction.

Sincerely,

Richard Danzig  
Principal Deputy Assistant  
Secretary of Defense (MRA&L)

Enclosure



GAO Draft Report Dated 20 October 1980  
(OSD Case 5553)

"DoD Needs to Better Manage Its Program for Reducing the Real Property Maintenance and Repair Backlog"

I. Position Summaries

A. GAO Position

Congress should not rely on the backlog of maintenance and repair (EMAR) data reported by DoD because the figures are constrained and understate the actual level of maintenance and repair deficiencies. DoD provides insufficient oversight which results in inadequate inspection programs, deficient work plans, inadequate EMAR cost estimates and problems in reporting EMAR. Because DoD has failed to define a manageable level of EMAR and give guidance for its use, little consideration is given to backlog in funding decisions. The statutory maintenance floor is not effective in checking EMAR growth since it is not related to unconstrained total requirements.

B. Defense Position

The Department of Defense generally agrees that there exists some problems with regard to reporting of the backlog of maintenance and repair (EMAR). The guidance developed by DoD with the consensus of the military services is in most cases definitive yet broad enough to provide the flexibility required by the Services for cost effective management. Although EMAR is intended to be a constrained statistic and should not be a report of all known maintenance and repair deficiencies, the GAO report notes varying degrees of interpretation of the DoD guidance. Actions will be taken to clarify and correct this problem. DoD will also develop and promulgate a definition of manageable level. Even though a manageable level of EMAR has not been uniformly defined, the EMAR statistic is very definitely considered by the Services and DoD in both programming and budgeting decisions. Limited resources have rendered most guidance and management actions ineffective in controlling EMAR growth, and trying to relate the statutory maintenance floor to unconstrained total requirements will not resolve this problem.

II. Recommendations and Responses

Recommendation: Require the military services to modify their systems where necessary and implement controls to ensure that they uniformly interpret the definition and instructions for reporting backlog.

Response: Concur. DoD will reevaluate guidance and provide appropriate instructions to the Services to ensure a more uniform interpretation and reporting of EMAR.

Recommendation: Report the DoD's unconstrained total requirements in its annual budget presentation to provide increased visibility in the area of real property maintenance and repair.

Response: Do not concur. EMAR is intended to be a constrained high-priority, essential list of deficiencies which have not been corrected because of lack of resources. Reporting unconstrained total deficiencies would require additional inspection personnel and incur an increased administrative workload. Use of this unconstrained figure would not be as meaningful nor effective as a management statistic in making resource decisions in programming and budget areas.

Recommendation: Require the Services to improve their inspections and planning to ensure that maintenance and repair project identification is complete and that projects are validated and based on adequately derived and current cost estimates.

Response: Concur. Services will be instructed to reemphasize proper procedures for inspection, project evaluation, and current cost estimates of maintenance and repair deficiencies.

Recommendation: Establish and issue criteria to be used by the Services in determining manageable or acceptable levels of maintenance backlog.

Response: Concur. DoD will develop and promulgate a definition of manageable level.

Recommendation: Issue guidance to provide that the defined manageable level be uniformly used by all the military services in evaluating relative plant condition and the adequacy and effectiveness of funding decisions related to real property.

Response: Concur. Guidance will be provided to the Services for use in funding decisions related to the real property plant conditions.



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