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REPORT BY THE U.S.

# General Accounting Office

## Navy Material Handling Equipment Costs Can Be Reduced

GAO estimates that elimination of unneeded material handling equipment, establishment of reasonable equipment allowances, and efficient use of needed equipment would save \$5.3 million in future replacement costs at the five activities reviewed. If the Navy exercised effective management of material handling equipment at all its activities, future replacement costs and annual maintenance and repair costs could be reduced by tens of millions of dollars.



LCD-80-31  
JANUARY 30, 1980



UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

LOGISTICS AND COMMUNICATIONS  
DIVISION

B-146828

The Honorable Harold Brown  
The Secretary of Defense

Dear Mr. Secretary:

This report discusses ways in which the Navy can reduce maintenance and replacement costs of material handling equipment by more efficient management and utilization of equipment onhand.

Chapter 5 of this report contains our recommendations which, if implemented, could reduce excessive inventory onhand and save millions of dollars in procurement expenditures. As you know, section 236 of the Legislative Reorganization Act of 1970 requires the head of a Federal agency to submit a written statement on actions taken on our recommendations to the House Committee on Government Operations and the Senate Committee on Governmental Affairs not later than 60 days after the date of the report and to the House and Senate Committees on Appropriations with the agency's first request for appropriations made more than 60 days after the date of the report.

We are sending copies of this report to the Secretary of the Navy; the Director, Office of Management and Budget; and the Chairmen of the appropriate congressional committees.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "R. W. Gutmann".

R. W. Gutmann  
Director

D I G E S T

The Navy has long recognized that material handling equipment can increase productivity in operations involving the physical handling of materials. However, because of the equipment's high initial investment costs, as well as repair and maintenance costs, activities should acquire and maintain only that equipment which is actually needed.

At five Navy activities reviewed, GAO estimated that elimination of unneeded equipment, establishment of reasonable equipment allowances, and efficient use of needed equipment would save \$5.3 million in future replacement costs and would substantially reduce annual maintenance and repair costs. As of December 1, 1978, the Navy had 14,813 items of material handling equipment which had cost about \$118 million. Approximately \$9.9 million worth of the equipment was excess to authorized allowances.

The Navy plans to spend more than \$141 million during fiscal years 1980 through 1984 to replace much of this equipment. In addition, it will spend substantial sums for maintenance and repair. Many Navy activities have large quantities of material handling equipment onhand excess to their actual needs because approved allowances have not been updated based on current usage standards and actual usage. Consequently:

- Much of the material handling equipment is greatly underused. (See p. 8.)
- Almost all material handling equipment qualifies for disposal based on age before it has provided the amount of service anticipated when it was bought. (See p. 8.)
- Navy activities are incurring millions of dollars to replace and repair unneeded equipment. (See pp. 8, 9, and 10.)

--Imbalances exist in the distribution of material handling equipment among Navy activities. Some activities have excess equipment, while others need identical equipment. (See pp. 9 and 10.)

GAO recommends that the Secretary of Defense direct the Navy to:

- Establish realistic usage standards for material handling equipment and, on the basis of these standards, update authorized equipment allowances.
- Redistribute within the Navy, or transfer to the Defense Property Disposal Service for reutilization screening or disposal, all equipment that exceeds the updated authorized allowances.
- Require commanders of all activities which are authorized material handling equipment to make one component of their activities responsible for control of all such equipment and for its efficient use.
- Establish controls at a high enough management level to ensure that all recommendations made by the Naval Audit Service and concurred in by the affected activities are promptly and effectively carried out.
- Report to you on the implementation of these recommendations. The report should include, by activity and by type of equipment, the quantities and dollar value of material handling equipment (1) authorized under the new allowances, (2) onhand, (3) under or over allowances, (4) redistributed within the Navy, and (5) transferred to the Defense Property Disposal Service.
- Base its fiscal year 1982 and future years' budget requests on updated allowances for material handling equipment.

The Department of Defense agreed with GAO's findings and indicated a number of actions had been taken in the latter half of fiscal year 1979 that would bring about the improvements GAO recommended. (See ch. 6.)

However, the Department of Defense stated GAO's proposal that Defense exclude any requests for funds to purchase or lease material handling equipment from future budget requests until the Navy had effectively accomplished GAO's other proposals would adversely affect fleet readiness and prevent systematic replacement of coverage equipment. Therefore, to give Defense and the Navy sufficient time to take the necessary corrective actions, GAO modified its proposal and is now recommending that the Navy's fiscal year 1982 and future years' budget requests for funds to purchase or lease material handling equipment be based on updated allowances.

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<u>ABBREVIATIONS</u>	
GAO	General Accounting Office
MHE	material handling equipment

## CHAPTER 1

### INTRODUCTION

The Navy has long recognized that material handling equipment (MHE) can increase productivity in operations involving the physical handling of materials. However, because of the high initial investment costs of MHE, as well as the day-to-day repair and maintenance costs, Navy activities should acquire and maintain only those types and quantities of equipment that are actually needed to meet their requirements. If they acquire and retain more than needed, inefficient equipment use and unnecessary costs result.

The Naval Supply Systems Command is responsible for overall Navy MHE policy and program management guidance. The command has assigned to the Ships Parts Control Center responsibility for inventory management, including review and approval of equipment allowances and budgeting, accounting, engineering, and technical functions.

MHE, for purposes of this report, includes all self-propelled equipment normally used by the Navy in storage and handling operations in and around warehouses, shipyards, docks, and terminals and aboard ships. It includes such equipment as warehouse tractors, forklift trucks, platform trucks, pallet trucks, straddle carrying trucks, and warehouse cranes.

### EQUIPMENT INVENTORIES AND COSTS

As of December 1, 1978, the Navy's inventory contained 14,813 MHE items costing about \$118 million. This inventory consists of

- operational MHE at shore activities and aboard ships;
- pools of MHE strategically located to provide immediate replacements to ships from fleet issue control points at the Naval Supply Centers, Norfolk, Virginia, and Oakland and San Diego, California, and at the Naval Supply Depot, Subic Bay, the Philippines; and
- prepositioned war reserve stocks at the supply centers in Norfolk and Oakland.

About 47 percent of the Navy's forklift trucks and 43 percent of the other items in its MHE inventory have exceeded their estimated useful lives (the years of economic use the Navy anticipated when it acquired the equipment). In 1976 the Navy began a 10-year phased plan to update its

MHE inventory and plans to spend more than \$141 million to replace much of the inventory during fiscal years 1980-84. (See app. I.) In addition, substantial sums are spent to repair MHE. During calendar year 1977, for example, Navy shore activities and ships spent about \$9.5 million to repair and maintain the equipment.

With regard to replacing MHE, the Department of Defense has established (1) limitations on the one-time and cumulative repair costs that can be incurred on MHE items and (2) life expectancies, both in years and operating hours, for maximum economic utilization. (See app. II.)

### SCOPE OF REVIEW

We reviewed Navy policies, procedures, and practices for managing and using MHE and discussed these matters with Navy officials. We also tested the procedures and practices at selected activities. In addition, we reviewed recent Naval Audit Service reports dealing with the equipment.

Our work was done at the:

- Naval Supply Systems Command, Washington, D.C.
- Ships Parts Control Center, Mechanicsburg, Pennsylvania.
- Naval Supply Center, Norfolk, Virginia.
- Naval Shipyard, Portsmouth, Virginia.
- Naval Air Station, Norfolk, Virginia.
- Naval Weapons Station, Colts Neck, New Jersey.
- Naval Ordnance Station, Indian Head, Maryland.

## CHAPTER 2

### RETENTION OF UNNEEDED EQUIPMENT CAUSES

#### INEFFICIENT UTILIZATION AND UNNECESSARY COSTS

Many Navy shore activities and fleet issue control points have large quantities of MHE onhand that are excess to their needs. Some of this unneeded equipment is excess to the activities' approved allowances and is, therefore, not authorized to be onhand. In addition, the allowances often authorize excessive amounts of MHE because they have not been updated to reflect reasonable usage standards and actual use of equipment. Consequently:

- Much of the MHE is greatly underutilized. Usage of individual items averaged 360 hours during calendar year 1977, or only 30 percent of the Navy's utilization goal.
- Almost all Navy MHE qualifies for disposal based on age before it has provided the amount of service anticipated when it was bought.
- Navy activities are incurring millions of dollars to replace and repair unneeded equipment.
- Imbalances exist in the distribution of MHE among Navy activities. Some activities have excess equipment, while others need identical equipment.

At five installations included in our review, we estimate that elimination of unneeded MHE, establishment of reasonable equipment allowances, and efficient use of needed equipment will allow the Navy to avoid periodic replacement of MHE valued at \$5.3 million and will substantially reduce annual equipment maintenance and repair costs.

Reports issued by the Naval Audit Service over the past few years (see ch. 4) indicate that similar conditions are prevalent throughout the Navy. If the Navy based MHE allowances on reasonable, efficient usage and redistributed equipment which is not needed at its current locations, it could avoid planned future procurements amounting to tens of millions of dollars.

#### EQUIPMENT RETAINED IN EXCESS OF APPROVED ALLOWANCES

At the time of our review, Navy shore activities and fleet issue control points were retaining MHE that was excess

to the allowances approved by the Ships Parts Control Center. Although MHE allowances throughout the Navy are outdated (see p. 6), they are the most current official determination of activities' needs, and therefore, should have been used as a ceiling for the amount of equipment onhand.

As discussed later in this chapter, retention of excess MHE prevents its redistribution to activities needing it and results in lower overall equipment use and unnecessary replacement and repair costs.

### Shore activities

As of September 30, 1978, 106 of 272 shore activities had a total of 639 items, or approximately \$9.9 million worth of MHE, excess to their authorized allowances. The cost of this excess is based on the weighted average cost of excess MHE at the five activities we audited.

As of December 1978, three of the activities audited had equipment excess to their authorized allowances because they had not promptly disposed of replaced MHE. For example, between November 1975 and September 1978, the Norfolk Naval Shipyard received at least 52 MHE replacement items. The shipyard disposed of only 18 replaced items promptly and took 4 to 33 months to dispose of 16 items. As of December 1978, the remaining 18 replaced items were still being operated and maintained even though they were excess to the shipyard's allowance.

In addition, three activities had excess equipment on-hand that was not shown on the Ships Parts Control Center's records. This occurred because the activities had not disposed of the equipment after the Control Center authorized disposal. The following schedule shows the number of unrecorded items.

<u>Activity</u>	<u>Unrecorded items</u>
Indian Head Ordnance Station	5
Norfolk Shipyard	3
Norfolk Supply Center	<u>34</u>
Total	<u>42</u>

To ensure that excess MHE is properly disposed of when required, the Control Center should monitor disposal actions and retain records of equipment items until it receives verification of their disposal.

## Fleet issue control points

As stated earlier, MHE is located at fleet issue control points to provide immediate equipment replacement to fleet vessels. When control point inventories reach an excess position, appropriate redistribution or disposal actions should be taken. As of December 1, 1978, however, the control point inventories exceeded authorized allowances, as shown below.

<u>Control point</u>	<u>Authorized allowance</u>	<u>Onhand quantity</u>	<u>Excess quantity</u>
Norfolk Supply Center	182	362	180
Oakland Supply Center	112	277	165
San Diego Supply Center	104	148	44
Subic Bay Supply Depot	<u>61</u>	<u>135</u>	<u>74</u>
Total	<u>459</u>	<u>922</u>	<u>463</u>

Of the 922 items onhand, 562 had never been issued to fleet ships as of December 1, 1978, and 206 of the 562 items were 5 or more years old. For example, of 154 4,000- and 6,000-pound forklift trucks at the four control points, none had been issued and 11 were over 5 years old. At the same time, electric forklift trucks of these capacities were in great demand by shore activities. In fact, various shore activities had requested 189 4,000-pound forklifts and 61 6,000-pound forklifts to replace existing equipment.

Although MHE for fleet use is procured to meet special specifications, we believe the excess control point inventory should be redistributed to satisfy shore activities' requirements when feasible, especially since much of it has been onhand for long periods and has been seldom used.

### AUTHORIZED ALLOWANCES FOR EQUIPMENT EXCEED ACTUAL NEEDS

The proper quantity of MHE is essential if activities are to carry out material handling operations economically and efficiently. However, excessive quantities of MHE are often authorized at Navy activities because allowances have

not been updated based on reasonable usage standards and current use.

Need to establish usage standards  
and review current use

The Navy has prescribed 1,200 operating hours a year as its general goal for using all types of MHE at shore activities. This goal is based on a one-shift operation of 2,000 available working hours annually, and it presumes that MHE should generally be used 60 percent of the available time.

Navy instructions require that local activities establish, and submit to the Ships Parts Control Center for approval, usage standards for determining MHE allowances and the effectiveness of assigned equipment. These standards are to be established for each type of MHE on the basis of current workloads and are to be expressed as a percentage of the normal workday during which the equipment will be used. These standards also should reflect any peculiar operating conditions at the activity, such as widespread areas served, specialized applications requiring a particular type of equipment, and conditions which normally prohibit full-time productive use. Once standards have been submitted to the Control Center, subsequent submissions are not required unless changes in workload conditions change equipment requirements by 5 percent or more.

Realistic usage standards to monitor actual MHE usage permit management to better determine when usage is low and when equipment allowances should be revised. However, the standards are often not used to monitor actual MHE usage. In fact, Control Center records showed that 139 of 272 activities using MHE had not even submitted standards for approval. Four of the five Navy activities included in our review had submitted standards; however, the standards were not used to determine the effectiveness of MHE utilization or to revise equipment allowances.

Comparison of our computed allowances  
with those authorized by the Navy

We computed reasonable MHE allowances for the five activities reviewed and found that all the currently approved allowances were excessive, as shown below.

<u>Activity</u>	<u>Authorized allowance</u>	<u>Our computed allowance</u>	<u>Excess equipment authorized</u>
Norfolk Supply Center	735	442	293
Norfolk Shipyard	298	247	51
Norfolk Air Station	310	268	42
Earle Weapons Station	182	101	81
Indian Head Ordnance Station	<u>66</u>	<u>36</u>	<u>30</u>
<b>Total</b>	<b><u>1,591</u></b>	<b><u>1,094</u></b>	<b><u>497</u></b>

Our allowance was computed by determining for selected areas at each activity the number of equipment that would be needed if usage standards were met, except at the weapons station and the ordnance station. Because the weapons station had not established standards, we recomputed the allowance based on demand for MHE during a peak workload period and allowed a reserve for contingencies. At the ordnance station, we also allowed a reserve for contingencies and assumed increased pooling among individual locations because equipment was assigned to specific locations and seldom moved.

We realize that, because our computed allowances for three activities are based on standard usage rates, they are only as accurate as the standards are valid. Also, we recognize that our method cannot be the only criterion in determining equipment authorizations. However, this method is a valid means of determining whether significant excesses exist, as we found was the case. In addition, other indications of excess MHE were found at the three activities. For example, the three activities did not use 72 items of equipment at all during a 3-month peak workload period and used 314 items less than 10 percent of the available time.

As discussed in the next sections of this chapter, excessive MHE allowances, along with the retention of identified excess equipment discussed earlier, lead to inefficient equipment utilization and unnecessary replacement and repair costs.

## INEFFICIENT UTILIZATION OF EQUIPMENT

During calendar year 1977, actual use of MHE at Navy shore activities averaged 360 hours, or only 30 percent of the Navy's goal. Because replacement is based primarily on the age of equipment, it is often replaced even though it has been operated substantially less time than expected when it was bought.

Although most of the MHE being replaced has reached or exceeded the age at which it qualifies for replacement, 92 percent of the equipment has not provided the hours of useful service anticipated when it was acquired. For example, at the five activities we reviewed, the items scheduled for replacement exceeded their replacement age, but had been used an average of only 56 percent of the hours expected. As shown in the following schedule, actual utilization of five types of MHE was especially low.

<u>Equipment</u>	<u>Expected use</u>		<u>Actual use</u>		
	<u>Years</u>	<u>Hours</u>	<u>Years</u>	<u>Hours</u>	<u>Percent of expected use</u>
Forklift (gas, 15,000 lbs.)	10	12,000	12	4,919	41
Forklift (diesel, 6,000 lbs.)	8	9,600	11	2,388	25
Forklift (gas, 4,000 lbs.)	8	9,600	10	4,055	42
Tractor (gas, 4,000 lbs.)	8	9,600	11	4,493	47
Crane (diesel, 20,000 lbs.)	12	14,400	10	5,135	36

Inefficient equipment usage stems not only from activities having excess MHE but also from the failure to exercise effective central control and pooling of equipment, which is discussed in chapter 3.

## OPPORTUNITIES TO REDUCE EQUIPMENT REPLACEMENT AND REPAIR COSTS

As discussed above, the quantities of MHE in use at many Navy activities greatly exceed requirements because (1) equipment excess to approved allowances has been retained and (2) approved allowances exceed actual needs. By correcting these problems and reducing MHE inventories, the Navy could greatly

reduce the costs of replacing and repairing its equipment.

Savings in replacement costs

As mentioned earlier, we estimated reasonable MHE allowances at the five activities included in our review. At each activity, our estimated allowance was substantially smaller than either (1) the quantity of MHE actually onhand or (2) the activity's authorized allowance. By basing their future MHE procurements on our more realistic allowances, the five activities alone could save at least \$5.3 million, as shown below.

<u>Activity</u>	<u>Onhand quantity</u>	<u>Our computed allowance</u>	<u>Difference</u>	<u>Savings (note a)</u>
Norfolk Supply Center	569	442	127	\$1,952,733
Norfolk Shipyard	300	247	53	918,746
Norfolk Air Station	309	268	41	580,322
Earle Weapons Station	182	101	81	1,031,759
Indian Head Ordnance Station	<u>73</u>	<u>36</u>	<u>37</u>	<u>781,125</u>
Total	<u>1,433</u>	<u>1,094</u>	<u>339</u>	<u>\$5,264,685</u>

The Navy could not only realize savings in future replacement costs by reducing MHE allowances, but it could also achieve additional savings by redistributing the excess MHE to fill other activities' valid needs. We found that new equipment items identical to those determined to be excess at the activities reviewed had been requested by other Navy activities to replace their existing equipment. For example, other Navy activities had requested all three types of equipment that would become excess at the weapons station if its allowance were reduced. This is illustrated below.

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a/ Requirements based on our allowance.

<u>Equipment type</u>	<u>Weapons station excess</u>	<u>Number of requesting activities</u>	<u>Total quantity requested</u>
Forklift (electric, 4,000 lbs.)	27	40	189
Forklift (electric, 6,000 lbs.)	16	25	61
Pallet truck (electric, 6,000 lbs.)	38	18	59

By redistributing the weapons station's excess MHE to activities with valid requirements, the Navy could avoid procurement of equipment having a replacement value of over \$891,000.

#### Savings in repair costs

In addition to saving procurement costs by reducing allowances and redistributing excess MHE, the Navy could reduce repair and maintenance costs. The following schedule shows the average cost to maintain excess MHE at the five activities we reviewed.

<u>Activity</u>	<u>Total MHE repair cost in 1977</u>	<u>No. of MHE items onhand</u>	<u>Average maintenance cost per item</u>	<u>No. of excess MHE items</u>	<u>Cost to maintain excess MHE</u>
Norfolk Supply Center	\$ 679,311	569	\$1,194	127	\$151,638
Norfolk Shipyard	279,632	300	932	53	49,396
Norfolk Air Station	247,420	309	801	41	32,841
Earle Weapons Station	44,574	182	245	81	19,845
Indian Head Ordnance Station	<u>19,953</u>	<u>73</u>	273	<u>37</u>	<u>10,101</u>
Total	<u>\$1,270,890</u>	<u>1,433</u>		<u>339</u>	<u>\$263,821</u>

If the Navy's inventory contained only those items actually needed, overall MHE usage would improve and MHE could be replaced according to its usage rather than its age. In this way, the increased cost and nonproductive downtime associated with maintaining older equipment could be avoided.

### CHAPTER 3

#### MORE CENTRAL CONTROL AND

#### POOLING OF EQUIPMENT ARE NEEDED

To keep costs at a minimum and operating efficiency at a maximum, MHE should be used as much as possible. However, MHE may be needed only part of a day in many operations and may be needed an entire day or longer in other operations. Under these circumstances, efficiency is best served by dispatching equipment to operations rather than assigning it full-time to individual activities and allowing it to sit idle. Administrative control of MHE should therefore be vested in a central group or office with authority to strategically place and dispatch equipment to satisfy workload requirements. After an MHE item is used to complete a specific job, it should immediately become available to the central group for others' use.

Navy activities are required to designate a central MHE control authority and to pool equipment whenever possible to ensure its efficient use. But control of MHE was not always vested in a central group at the activities we reviewed, and when it was, the group lacked sufficient authority to provide effective control. Consequently, equipment was not effectively utilized and unnecessary costs were incurred.

At two activities, for example, various departments obligated more than \$500,000 to lease MHE when similar equipment was onhand at other departments of the same activities. Some or all of these leasing costs might have been avoided had the MHE at each activity been effectively pooled under one central authority. The following examples show the adverse effects of fragmented MHE management.

--During April, May, and June 1978, the Norfolk Naval Supply Center leased 35 to 45 forklifts each day. During the same period, the center had 36 similar forklifts onhand which, based on the Navy's utilization goal, were excess to the center's needs. The center spent a total of about \$263,000 during fiscal year 1978 to lease MHE. Because MHE was not controlled centrally, center personnel responsible for determining the amount of equipment to be leased did so without knowledge of what MHE was available elsewhere at the center. Conversely, the officials responsible for determining the center's equipment needs and for assigning MHE did not know the extent of MHE leasing.

--At the Norfolk Naval Shipyard, one department was assigned responsibility for controlling MHE. However, equipment was rarely moved from one using department to another, and officials said they doubted their authority to make reassignment decisions. During April, May, and June 1978, 90 pieces of MHE were used no more than 10 percent of the available time and 21 were not used at all. At the same time, the shipyard leased MHE identical to that which was underutilized. For example, a Navy-owned forklift used for training during fiscal year 1978 was operated less than 5 percent of the available time, while \$5,280 was spent to lease a comparable forklift. In total, the shipyard obligated over \$231,000 during fiscal year 1978 to lease MHE.

--At the Earle Naval Weapons Station, the designated central control division lacked the authority to strategically place and dispatch MHE once it was assigned to the operating divisions. Utilization of MHE at the station averaged only about 4.6 percent of the available time, and equipment sat idle for long periods. During the 3-month peak production period, April through June 1978, of 122 electric forklifts, 28 were used less than 10 hours and 9 were not used at all. The head of the central control division informed us that, if he could exercise control over MHE and assign it to meet actual periodic requirements, the station could reduce its current inventory by about 30 percent and continue its present productivity.

--At the Indian Head Naval Ordnance Station, MHE items are assigned to operating departments and are usually left there permanently, regardless of their usage. For instance, 18 forklifts permanently assigned to the ammunition magazines had an average utilization of about 3 percent, or only 60 hours annually. We pointed out that the opening of magazines is scheduled in advance, and since normally no more than two are open at the same time, pooling the equipment would be advantageous. Station officials agreed that pooling could reduce the number of equipment items in the magazine area.

## CHAPTER 4

### NAVY MANAGERS HAVE FAILED TO MAKE

#### IMPROVEMENTS RECOMMENDED BY INTERNAL AUDITORS

The Naval Audit Service has given substantial attention to MHE management and utilization in its audits of Navy activities. From January 1976 to January 1978, the Audit Service issued at least 11 reports that covered the equipment, and 6 of the reports showed that the activities audited had excess MHE onhand, as shown below.

<u>Activity audited</u>	<u>Report date</u>	<u>No. of excess MHE</u>
Naval Ordnance Facility, Sasebo, Japan	1-11-78	28
Naval Weapons Station, Charleston, S.C.	12-16-77	38
Naval Weapons Station, Yorktown, Va.	9-17-77	106
Naval Air Facility, Sigonella, Cantanis, Sicily	8-30-77	30
Naval Weapons Station, Concord, Calif.	6-08-77	111
Naval Supply Center, Puget Sound, Wash.	9-12-77	38

In pointing out the need for improved utilization and management of MHE, many Audit Service reports recommended that activities establish realistic usage standards and reduce their inventories to be compatible with current operating needs. Although the activities audited generally agreed with the recommendations, several of them had not substantially reduced the number of MHE items onhand as of September 30, 1978, and had not improved equipment utilization. For example:

--In its August 30, 1977, report on the Sigonella Air Facility, the Audit Service stated that as many as 30 of 62 items of MHE might be excess. The report recommended that the air facility (1) review MHE utilization using local standards to determine MHE requirements and the effectiveness of equipment

assignments and (2) redistribute MHE where necessary and dispose of equipment excess to requirements. Although the facility generally agreed with these recommendations, its MHE inventory had increased from 62 to 79 items as of December 1, 1978.

--In its March 25, 1975, report, the Audit Service stated that 16 of 68 onhand equipment items were excess at the Puget Sound Supply Center. The report recommended that MHE utilization be reviewed and that excess equipment be made available for redistribution. Although the center concurred in the recommendations, a subsequent audit report dated September 12, 1977, stated that MHE management had not improved. Furthermore, the followup report stated that, based on operating needs, the supply center required only 31 MHE items, or less than half of the 69 items onhand. However, more than 3 years after the 1975 report and 1 year after the 1977 report, the supply center had 70 items of equipment onhand and utilization had not improved.

--Although the Audit Service did not identify specific excesses at the Earle Weapons Station in its September 10, 1976, report, it did express a belief that, because of the downward trend in workload, MHE inventories included some excess items that should be identified and reported for redistribution to other activities. In response to recommendations made by the Audit Service, the weapons station stated that, with the help of the Transportation Equipment Management Center, Chesapeake Division, Naval Facilities Engineering Command, it would make a complete study of MHE utilization. It further stated that, when the results had been fully analyzed, a portion of the allowance would be cut and reported to the Ships Parts Control Center. The Naval Sea Systems Command agreed with the weapons station's response. The utilization study, completed early in 1976, showed the following results.

<u>Equipment type</u>	<u>Quantity onhand</u>	<u>Excess quantity</u>
Forklift truck	106	48
Boomlift truck	26	16
Transporter	60	37

Although the excess MHE was identified early in 1976, no action has been taken to reduce the allowance and report the excess items to the Control Center as of August 1978.

## CHAPTER 5

### CONCLUSIONS AND RECOMMENDATIONS

Through better utilization and more effective control of MHE, the Navy can greatly reduce its activities' authorized MHE allowances and achieve significant savings in its future replacement, repair, and leasing costs. Underutilization of and excessive allowances for MHE appear to be widespread throughout the Navy, as evidenced by our review and the numerous reports by the Naval Audit Service.

The Navy plans to spend more than \$141 million during the ensuing 5 years to replace MHE. This procurement program is justified primarily on the basis that the MHE inventory is overage and costly to maintain and experiences excessive downtime. But we believe that, because the condition of the inventory results from excessive quantities of equipment on-hand, the Navy can significantly reduce its future need to replace overage MHE. The basic causes of the excessive MHE are:

- Allowances for MHE have not been updated to reflect current requirements.
- Identified excess MHE has not been disposed of or redistributed.
- Recommendations made by internal auditors to improve utilization and management of MHE, and concurred in by the affected activities, have not been carried out.

### RECOMMENDATIONS

We recommend that the Secretary of Defense emphasize the need for maximum utilization of MHE and direct the Navy to:

- Establish realistic usage standards for MHE and, on the basis of these standards, update authorized MHE allowances.
- Redistribute within the Navy, or transfer to the Defense Property Disposal Service for reutilization screening or disposal, all equipment that exceeds the updated MHE allowances.
- Require commanders of all activities which are authorized MHE to make one component of their activities responsible for control of all MHE and for its efficient use.

- Establish controls at a high enough management level to ensure all recommendations made by the Naval Audit Service and concurred in by the affected activities are promptly and effectively carried out.
- Report to you on the implementation of these recommendations. The report should include, by activity and by type of equipment, the quantities and dollar value of MHE (1) authorized under allowances, (2) onhand, (3) under or over allowances, (4) redistributed within the Navy, and (5) transferred to the Defense Property Disposal Service.
- Base its 1982 and future years' budget requests for funds to purchase or lease MHE on updated allowances that represent actual need.

## CHAPTER 6

### AGENCY COMMENTS AND OUR EVALUATION

We provided the Navy and the Secretary of Defense with copies of a preliminary draft of this report, and we met with cognizant Navy and Defense officials on October 26, 1979, to obtain their views. On November 21, 1979, the Principal Deputy Assistant Secretary of Defense (Manpower, Reserve Affairs and Logistics) furnished Defense's comments on the draft report to us. (See app. III.)

Defense officials generally agreed with the draft report. However, they took exception to our proposal that the Secretary of Defense direct the Navy to exclude any requests for funds to purchase or lease equipment from future budget requests until corrective actions relating to the reported deficiencies were accomplished.

Defense and the Navy officials recognized the need for better management and procedures for determining allowances and utilization of material handling equipment. They also stated that positive actions, initiated in the latter half of fiscal year 1979, were underway to correct the problems cited in our report. These actions included:

- Contractual support for the purpose of improving overall MHE management practices which will include the goal of establishing better usage standards and allowance determinations of MHE in both normal warehousing and mission-essential operations.
- Advising all Navy activities which are authorized MHE that deliveries of new equipment will not be made to any activities holding equipment in excess of authorized allowance.
- All Navy activities having MHE excess to their authorized allowances are to report it to the central manager for disposition instructions.

However, Defense officials stated that good business management and fleet readiness dictate continued systematic replacement of the Navy's MHE inventory, while corrective actions required are being taken. The Navy informed us that there is an 18-month procurement leadtime for new MHE, and that withholding fiscal years 1980 and 1981 funds would result in buildup of requirements that would have to be met in 1982 and subsequent years.

After carefully considering the possible consequences of withholding funds for fiscal years 1980 and 1981, we have modified our draft report proposal to give the Navy sufficient time to take the actions recommended in this report.

Additionally, in our draft report we proposed that the Navy establish controls at a high enough management level to ensure that all recommendations made by the Naval Audit Service and concurred in by the affected activities are implemented in a timely and effective manner. Defense concurred, but stated that such controls are inherent in the MHE responsibilities of the Ships Parts Control Center and will be reemphasized.

We agree that such controls are inherent in the delegation of management responsibility for a program to any subsidiary organization. However, in this case, the point is that the responsibility has not been carried out effectively. The evidence of this failure is presented clearly and in detail in chapter 4 of this report. Issuance of directives or their reemphasis does not ensure performance or necessarily act as a control to ensure the responsibility will be carried out as directed. Effective management over delegated responsibilities demands controls to ensure those responsibilities are carried out effectively and promptly. Such controls need to be established in the Navy to ensure that recommendations made by the Naval Audit Service are promptly and effectively implemented.

In addition, the Principal Deputy Assistant Secretary commented that Defense was "particularly happy to provide this current information inasmuch as much of the data in your study showed the inventory position in 1977 and thus did not reflect the impact of the corrective actions undertaken to date." Although we did state that during calendar year 1977 the usage of individual items averaged only 360 hours, or only 30 percent of the Navy's utilization goal (see p. 3), our findings were not based on the inventory position of 1977. Our report discloses that as of the beginning of fiscal year 1979, 106 shore activities had a total of 639 items of MHE, worth approximately \$9.9 million, excess to their authorized allowances. (See p. 4.) It also shows that as of the beginning of the second quarter of fiscal year 1979, the five fleet issue control points had 463 items of MHE onhand in excess of authorized allowances. (See p. 5.)

Furthermore, our report explains how at the five activities included in our review, the Navy could save \$5.3 million by basing its future procurements on more realistic allowances. No actions have been taken as of December 1979 to develop revised realistic allowances based on actual need and usage.

Furthermore, such actions will not be undertaken until after the Navy reviews and adopts, if acceptable, the results of the contractual support referred to in Defense's comments.

We recognize the Navy took some actions in the latter part of fiscal year 1979 which, if properly and effectively controlled and followed, could result in much needed improvements in the Navy's management of its MHE. However, contrary to the Principal Deputy Assistant Secretary's comments, as of our most recent inquiry of December 1979 to the Navy, no documented evidence was available to demonstrate a measurable impact on the Navy's management of its MHE inventory that can be attributed to the corrective actions referred to in Defense's response.

PLANNED PROCUREMENT FUNDINGOF MHE (note a)

<u>MHE type</u>	<u>1980</u>	<u>1981</u>	<u>1982</u>	<u>1983</u>	<u>1984</u>	<u>Total</u>
	----- (millions) -----					
Forklift trucks	\$21.5	\$18.5	\$19.8	\$29.4	\$29.9	\$119.1
Other MHE	<u>1.5</u>	<u>5.0</u>	<u>3.3</u>	<u>6.0</u>	<u>6.2</u>	<u>22.0</u>
Total	<u>\$23.0</u>	<u>\$23.5</u>	<u>\$23.1</u>	<u>\$35.4</u>	<u>\$36.1</u>	<u>\$141.1</u>

a/Funding is based primarily on the fact that MHE inventory is overage, has become expensive to maintain, and is experiencing excessive downtime.

APPENDIX II

REPAIR LIMITS AND LIFE EXPECTANCIES FOR MHE

Type of equipment	Maximum economical utilization Years	Hours	Maximum cumulative repair limit (percent of replacement cost) (note a)	Maximum one-time repair limit (percent of replacement cost) for hours in use (note b)																	
				12	24	36	48	60	72	84	96	108	120	132	144	156	168	180			
Fork truck (gas 2,000 to 6,000 lbs.)	8	9,600	100	50	45	40	30	25	20	15	10	-	-	-	-	-	-	-			
Fork truck (gas 7,500 to 15,000 lbs.)	10	12,000	100	50	45	40	35	30	25	20	15	10	10	-	-	-	-	-			
Tractor (gas)	8	9,600	100	50	45	40	30	25	20	15	10	-	-	-	-	-	-	-			
Crane (gas)	12	14,400	100	50	50	45	45	40	40	35	30	25	20	15	10	-	-	-			
Platform truck (gas)	8	9,600	100	50	45	40	30	25	20	15	10	-	-	-	-	-	-	-			
Truck (straddle-carry, gas)	15	18,000	100	50	50	50	45	45	45	40	40	35	35	30	25	20	15	10			
Fork truck (electric 2,000 to 6,000 lbs.)	15	18,000	100	50	50	50	45	45	45	40	40	35	35	30	25	20	15	10			
Tractor (electric)	15	18,000	100	50	50	50	45	45	45	40	40	35	35	30	25	20	15	10			
Crane (electric)	15	18,000	100	50	50	50	45	45	45	40	40	35	35	30	25	20	15	10			
Platform truck (electric)	15	18,000	100	50	50	50	45	45	45	40	40	35	35	30	25	20	15	10			
Pallet truck (electric)	15	18,000	100	50	50	50	45	45	45	40	40	35	35	30	25	20	15	10			

a/Under unusual circumstances, the maximum cumulative repair limit may be extended provided the additional repairs will extend the remaining life expectancy of the equipment.

b/Column headings represent hundreds of hours of use, i.e., 12 means 1,200 hours, 24 means 2,400 hours, etc.



ASSISTANT SECRETARY OF DEFENSE  
WASHINGTON, D C 20301

MANPOWER  
RESERVE AFFAIRS  
AND LOGISTICS

21 NOV 1979

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 September 21 to the Secretary of Defense concerning underutilization of Navy material handling equipment (MHE) (B-146828, OSD Case 5286).

The Department of Defense concurs with the bulk of this report and remedial action has been initiated by the Navy as discussed below. Our major disagreement with the report stems from the recommendation that the withholding of procurement funds for new MHE will somehow resolve the problem. To abruptly stop procurement of MHE could result in the Navy ending up in the same position as you found the Army and Air Force with MHE being over age and overutilized to the extent that mission capability was seriously impaired (reference your case LCD-79-212, OSD Case #5212). Good business management and fleet readiness dictate continued systematic replacement of the Navy's MHE inventory, half of which is currently over age due to heavy procurements during the Vietnam era. Deficiencies in management and procedures for determining allowances and inadequate utilization of MHE were recognized in mid-1978. Remedial actions are underway.

The following paragraphs relate to other specific recommendations contained in the report and our comments thereon.

Recommendation Number 1 (Page 26)

Establish realistic standards for the utilization of MHE and, using these as a basis, update authorized allowances for MHE.

Comment

Concur. The Navy hired contractual support early in 1979 for the purpose of improving overall MHE management practice. Included in this effort is the goal of establishing better standards for utilization and allowance determination of MHE in both normal warehousing and extranormal, mission essential modes.

Recommendation Number 2 (Page 26)

Redistribute within the Navy or transfer to the Defense Property Disposal Service (DPDS) for reutilization screening or disposal all equipments that exceed the updated MHE allowances.

Comment

This action will be accomplished following the determination of realistic allowance quantities and utilization standards. This determination will be accomplished on an individual activity basis pursuant to each activity's own requirements and circumstances. The Naval Supply Systems Command issued a policy letter on July 11, 1979, which required the elimination of inventory excesses over current allowances. Activities which hold excesses are being directed to dispose of some units or to provide complete justification for retention based on excessive downtime due to over age and other mission requirements. New MHE will not be delivered to activities which hold excess equipment.

Recommendation Number 3 (Page 26)

Require commanders of all activities authorized MHE to designate one component of their organization to control all MHE and to be responsible for its efficient use.

Comment

Concur. An implementing instruction will be prepared.

Recommendation Number 4 (Page 26)

Establish controls at a high enough management level to insure that all recommendations made by the Naval Audit Service and concurred in by the affected activities are implemented in a timely and effective manner.

Comment

Concur. Such controls are inherent in the MHE responsibilities of the Ships Parts Control Center and will be reemphasized.

Recommendation Number 5 (Page 27)

Report to you on the implementation of these recommendations including, by activity and by type of equipment, the quantities and dollar value of materials handling equipment (1) authorized under the new allowances, (2) on hand, (3) redistributed within the Navy and (4) transferred.

Comment

The Department of Defense will report information concerning this recommendation when and in such detail as is desired by your office. Arrangements for the initial report were agreed to at a meeting of our respective staff representatives held on October 26, 1979. We are particularly happy to provide this current information inasmuch as much of the data in your study showed the inventory position in 1977 and thus did not reflect the impact of the corrective actions undertaken to date.

Sincerely,

A handwritten signature in black ink that reads "Richard Danzig". The signature is written in a cursive style with a large, sweeping flourish at the end.

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

(943050)