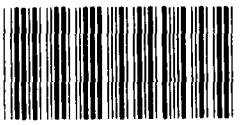
BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Secretary Of Transportation

Ineffective Management Of Ship Maintenance--A Coast Guard Problem

The Coast Guard has reported that it does not have enough ships, shore facilities, and personnel to carry out its assigned tasks. While this may be true, the Coast Guard could do more with its current vessel maintenance and support resources, such as realizing economies and efficiencies in its own vessel logistics support program and making greater use of other Government maintenance facilities. This interservice use of other Government facilities is required when practical, but the Coast Guard's use has been on a hit or miss basis; a concerted effort is needed.

The Department of Transportation and the Coast Guard agreed with GAO's recommendations that logistical support for vessel maintenance be improved. The Coast Guard has recognized the problems discussed and has instituted corrective actions.



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Logistics and
Communications
Division

B-200826

The Honorable Neil Goldschmidt
The Secretary of Transportation

Dear Mr. Secretary:

This report points out that the Coast Guard can reduce its vessel maintenance costs by improving its logistical support for vessel maintenance and by making greater use of other Government maintenance facilities.

The report contains recommendations to you on pages 12 and 22. 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 Director, Office of Management and Budget; the Secretary of Defense; and the Secretary of the Navy.

Sincerely yours,

R. W. Gutmann
Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE SECRETARY
OF TRANSPORTATION

INEFFECTIVE MANAGEMENT OF SHIP MAINTENANCE-- A COAST GUARD PROBLEM

D I G E S T

In 1973 the Coast Guard, because of problems being experienced with its maintenance support program at district offices, established the Ships Inventory Control Point at Curtis Bay, Maryland, as its central logistics manager. In 1980, however, GAO found that the Control Point is not yet an effective manager. The Coast Guard acknowledges some of its problems and has taken corrective actions. However, GAO found that district offices, in order to adequately support their own vessel maintenance needs, have reverted to individual, uneconomical support systems which adversely affect the total system.

For example, some districts were maintaining intermediate inventories contrary to Coast Guard policy, and districts were not sharing parts that were needed by another. Also, because each district hoards its own inventory, the Coast Guard has more inventory of some parts than requirements warrant. Much of the Control Point's inventory, which is stored at 23 U.S. stock points, is in not-ready-for-issue condition because:

--The districts lack incentives to properly repair parts before returning them to stock.

--There are no systemwide repair specifications.

--Quality assurance programs are lacking or inadequate.

As a result, the Coast Guard incurs additional repair and inspection costs before parts can be used and experiences some delays in getting vessels back in service.

The Control Point also lacks the management information it needs to improve as the central logistics manager. In some areas it is a vicious cycle; for example, the Control Point should compile demand data on districts' needs so it can determine what parts to centrally procure and stock. However, because it has been unable to fill districts' requests, the districts procure many items commercially without going through or informing the Control Point.

Opportunities also exist for the Coast Guard to reduce its maintenance costs by making greater use of other agencies' maintenance facilities. For example, during the 15-month period ended December 1979, the Navy Shore Intermediate Maintenance Activities and tenders in the Coast Guard's Norfolk area district were not fully used, while during the same period the Coast Guard district contracted commercially for repairs 44 times. Managers of the facilities told GAO that they could do some maintenance for the Coast Guard.

Government regulations require that before agencies procure services commerically they should first determine if interservice support potential exists. For vessel maintenance, however, the Coast Guard has not made a concerted effort to do this.

RECOMMENDATIONS

Specific GAO recommendations to improve the Coast Guard's logistical support for vessel maintenance appear on page 12. In addition, GAO recommends that the Secretary of Transportation direct the Coast Guard to develop a catalog of services available by

--disseminating and updating information to all districts on vessel maintenance interservice support currently being used by some districts and

--developing an inventory of all Government maintenance activities within a given radius, for example, 50 miles of where its vessels are stationed.

To facilitate greater interservice support and achieve better use of resources, GAO recommends that the Secretary of Transportation, with the Secretary of Defense and heads of other Federal agencies, develop vessel maintenance interservice support agreements.

AGENCY COMMENTS

The Department of Transportation states that GAO's report presents a true picture of the problems which the Ships Inventory Control Point has experienced. The Coast Guard has recognized the problems and has instituted corrective actions. The Department of Transportation also agrees to develop an inventory of all Government maintenance activities, to disseminate the information, and to use interservice agreements when they do not interfere with planned operational missions.

The Department of Defense stated that the Navy is willing to establish interservice support agreements for vessel maintenance in areas where Navy Shore Intermediate Maintenance Activities and Coast Guard stations are located. Defense officials agree that there are times when skill levels, operational scheduling, and port loading create potential periods of available shop capacity for undertaking Coast Guard maintenance. However, they say such opportunities may not be frequent.

Contents

ABBREVIATIONS

DOD	Department of Defense
DRIS	Defense Retail Interservice Program
GAO	General Accounting Office
RFI	ready for issue
SICP	Ship Inventory Control Point

CHAPTER 1

INTRODUCTION

The Coast Guard, in its fiscal year 1981 Spring Review, May 1979, reported that its resources fell short of the level necessary to adequately carry out its assigned tasks. According to the Coast Guard Commandant:

--Many ships are old and not capable of carrying out their missions.

--In many ways, shore facilities are inadequate to support mission and personnel needs.

--Personnel are not being retained.

In April 1980, in response to a request by the Chairman, Senate Committee on Commerce, Science and Transportation, we reported on these Coast Guard matters. 1/

Over the past several years, the Coast Guard has received a substantial increase in responsibilities in traditional areas, such as search and rescue, as well as in new areas, such as enforcing the 200-mile fishing limit. The Coast Guard stated that these increased responsibilities are pushing to the limits its decreasing number of vessels.

The Administration, however, has not requested an increase in resources for new vessels or for expanded vessel maintenance. As a result, the increased responsibilities, coupled with increased operating costs, have created a serious maintenance problem for the Coast Guard.

BACKGROUND

The Coast Guard, established by the Congress in 1790, is one of the oldest continuous Government organizations. Although it is considered to be one of the Armed Forces, it only functions under the Department of Defense (DOD) during wartime or national emergency. Otherwise it operates under the Department of Transportation. During peacetime, it mainly

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1/"The Coast Guard--Limited Resources Curtail Ability To Meet Responsibilities" (CED-80-76, Apr. 3, 1980).

(1) administers programs which are designed to protect life and property at sea, (2) maintains regulatory control over much of the marine transportation industry, and (3) enforces all Federal laws on waters subject to U.S. jurisdiction.

The Coast Guard's vessel maintenance program is administered by its headquarters in Washington, D.C.; the Coast Guard Yard and the Ship Inventory Control Point (SICP) at Curtis Bay in Baltimore, Maryland; and the 12 district offices located throughout the United States. Most maintenance is managed on a decentralized basis by the 12 Coast Guard districts.

The Coast Guard Yard in Baltimore is the Coast Guard's only shipyard. It performs depot maintenance on Coast Guard vessels and is the only Coast Guard facility capable of performing ship overhauls in drydock. The Coast Guard's centralized manager for vessel repair parts inventories is SICP. It also manages vessel repair parts stored at 23 U.S. stock points.

SOURCES OF MAINTENANCE SUPPORT

The majority of repairs to Coast Guard vessels are done commercially. However, the Coast Guard does have some in-house capability, and to a limited extent, does use other Government maintenance facilities.

The in-house capability consists of one shipyard and six district support centers. The shipyard at Curtis Bay does approximately 20 percent of the Coast Guard's total depot maintenance. However, it caters mostly to east coast or Gulf of Mexico vessels because of the excessive cost involved with transporting ships to it from the west coast. Support centers generally have the capability to overhaul engines and to repair or fabricate other parts.

District naval engineers are the primary maintenance managers in the Coast Guard. They allocate district maintenance funds, assign priority work, decide when and where repairs should be done, write repair specifications, and inspect repairs. They answer to the district commander if maintenance problems deter mission capabilities.

OBJECTIVES, SCOPE, AND METHODOLOGY

Because of congressional concern regarding the Coast Guard's ability to carry out its assigned missions, we

assessed the effectiveness of the Coast Guard's vessel maintenance program. We directed our review primarily at those aspects of the vessel maintenance program dealing with centralized parts management and the use of other Government maintenance facilities for support.

We made our analysis at Coast Guard headquarters in Washington, D.C.; the Coast Guard Yard and SICP at Curtis Bay in Baltimore, Maryland; and the 5th (Portsmouth, Virginia), 11th (Long Beach, California), and 13th (Seattle, Washington) district offices and support centers. We selected these district offices because they were near major Navy maintenance activities and they had maintenance work done commercially during previous fiscal years.

We analyzed the workload and capabilities of other Government agency facilities near these Coast Guard facilities, including the Navy (Shipyards and Intermediate Maintenance Activities), Army Corps of Engineers, and National Oceanic and Atmospheric Administration. First, we analyzed all ship repairs which the Coast Guard districts, Army Corps of Engineers, and National Oceanic and Atmospheric Administration had contracted to commercial contractors during fiscal year 1979. Next, we analyzed the capacity of the various maintenance facilities in these geographic areas and discussed with responsible agency officials their capability to perform maintenance for other agencies.

In our analysis of the Coast Guard's management of centralized vessel parts, we reviewed reports and studies on the centralized concept, examined records, and held discussions with Coast Guard officials at Coast Guard headquarters, SICP, and several districts.

CHAPTER 2

IMPROVEMENTS NEEDED IN THE COAST GUARD'S VESSEL LOGISTICS SUPPORT PROGRAM

The Coast Guard's vessel logistics support program has not effectively supported district offices' needs. Even though SICP was established to overcome supply support problems and inequities, they still persist today. Much of SICP's vessel parts inventory is in not-ready-for-issue (RFI) condition, and districts are maintaining intermediate inventories contrary to Coast Guard policy.

In 1979 the Coast Guard studied its logistics problems and issued an "Action Plan to Improve SICP Support of the Fleet" which it is studying. However, we believe the Coast Guard can improve vessel logistics support by (1) establishing incentives for districts to repair parts before returning them to the SICP inventory, (2) developing standard repair specifications, (3) improving quality assurance and packaging and preservation programs, and (4) having SICP develop the information it needs to effectively function as vessel logistics manager.

LOGISTICS MANAGEMENT SYSTEM

With the objective of providing for more disciplined, centralized management of repair parts inventories and other aspects of ship support, the Coast Guard established SICP in July 1973 at the Curtis Bay Coast Guard Yard in Baltimore, Maryland. It was to be fully operational for fleet support by late 1975 and would provide central procurement of hull and mechanical repair parts, management of parts inventories, and vessel repair parts.

Before SICP was established, the Coast Guard used two classifications of repair parts in providing ships maintenance support. Coast Guard headquarters staff managed high-dollar value parts known as headquarters-controlled material which was stored at various U.S. stock points. The districts were responsible for repairing and returning headquarters-controlled parts to stock. In addition, each district managed its own pool of spare parts and relied almost exclusively on local supply sources.

In June 1973, the Coast Guard's Commandant Instruction 4000 described the reasons for shifting to centralization:

> "The Coast Guard has been aware for some time of the need for reform in the Coast Guard Supply system. Difficulties in supply management and operations have been experienced at all supply echelons * * * In the absence of total system definition, districts have developed varying supply systems that foster inequitable total supply support, compartmentalize the systems strictly with individual districts, create training problems, and generally result in uneconomical support patterns. The lack of an effective provisioning policy has compounded the supply difficulties of operating units * * * Intermediate retail inventories have been maintained contrary to policy, and inventory management of on hand stocks throughout the Coast Guard has been in need of improvement. Clearly with such conditions prevailing, the need for reform has been apparent."

INVENTORY IN NOT-RFI STATUS

The Coast Guard's system for repairing parts is ineffective. Although SICP requires parts or components to be returned to its inventory in an RFI condition, there are several reasons why districts are not accomplishing needed repairs:

- --No incentive for districts to use their own maintenance funds to repair items for return to SICP for use by someone else.
- --A lack of standard repair specifications.
- --Poor quality assurance and packaging and preservation programs.

No incentive for districts to repair items for return to SICP

Although SICP does not charge districts for parts issued to them, SICP does require districts to repair and return defective parts to the SICP inventory. Districts, using their own maintenance funds, must recondition to RFI status the parts being returned. However, there is no incentive for the districts to do this since, as discussed later, they often have to spend their funds to repair parts received from SICP before they can use the parts.

Lack of standard
repair specifications

Even when districts strive to repair parts to RFI condition, they are hampered by a lack of repair specifications. As a result, districts receiving SICP parts must often spend additional funds to repair the parts and may experience delays in returning vessels to service. At one district, we found that due to the lack of confidence in SICP, it sent out each reworked propeller received from SICP for test and evaluation at a cost of $500 to $3,000. It also had commercial contractors to test engines at a cost of $2,000 to $4,000. Our review disclosed numerous examples where districts had received items considered RFI which needed additional repairs. One district's officials estimated that 70 percent of the engines from SICP needed repairs or modifications. Other officials provided the following examples where districts did not adequately repair parts due to inadequate repair specifications.

--The 13th District in Seattle, Washington, received a 41-foot cutter engine from the SICP inventory which had been repaired by another district. This engine had numerous problems, including incorrect fuel nozzles. The district spent over $9,600 to return the engine to RFI condition.

--The 5th District in Portsmouth, Virginia, received a set of engines from two different districts. These engines were not acceptable because they had been improperly piped and had essential parts missing. An additional $24,000 was required to repair the engines before they could be used.

Quality assurance and packaging
and preservation needs improvement

In addition to the lack of incentive and repair specifications, the quality of repair has been hampered by a lack of Coast Guard emphasis on quality assurance and packaging and preservation. SICP has provided little guidance to the districts in these areas. In 1979 it provided quality assurance information on engines and a handbook on packaging and preservation.

The main problem appears to be a shortage of qualified quality assurance staff at both the districts and SICP. For example, we were told that no quality assurance inspections were made on items repaired for SICP. This can have serious

impacts. The 5th District received shafting which had been repaired for SICP; however, an additional $108,000 was required to repair the shafting before it could be used. Also, additional drydocking cost $14,000, and the vessel's schedule was delayed by 1 month. A 5th District official said that a quality assurance inspection by SICP should have found the problem. SICP officials agreed that many problems of this type could be found earlier with an adequate quality assurance program.

DISTRICTS MAINTAINING INTERMEDIATE INVENTORIES CONTRARY TO POLICY

SICP, as the central inventory manager, was established to solve the problems which developed because districts maintained their own intermediate inventories. However, since districts have been dissatisfied with SICP's performance, they are circumventing the system and are still maintaining their own inventories. As a result, districts are hoarding assets which may be needed by other districts, and the Coast Guard is maintaining a larger inventory of some assets than is needed to meet overall demand.

The Coast Guard's inventory of repairable spare parts, such as ships' powerplants, propellers, shafts, and other renewable assets, is the property of SICP. When a district needs one of these parts, the district is supposed to submit a requisition to SICP which issues the needed part from 1 of its 23 stock points. SICP requires the district to repair and return the removed part to SICP stock.

This system, however, is not working. When SICP was implemented, districts lost control over some repairable assets known as district spares. At the same time, SICP began to issue parts repaired and returned from one district to another district. Because of the problems already discussed, districts have devised informal practices to work around the system with the objective of improving support for their own district only. For example:

--Districts keep as many parts from system visibility as possible. They do so by reporting parts as not-RFI, when, in fact, the parts have been repaired to perhaps 95 percent RFI. Districts wait until they need the parts to finish the repairs, and then they simultaneously advise SICP of the parts' RFI condition and submit requisitions for the parts.

--Districts delay repairs. As a result, districts can also delay incurring expenses as long as the defective parts remain in a state of disrepair. Diesel engines have been a particular problem in this area. SICP identified engines in districts which have been in the repair cycle up to 3 years. Coast Guard officials feel 4 to 6 weeks is a reasonable time period for a diesel engine overhaul.

Maintaining intermediate inventories results in system-wide inefficiencies. For example, at the Long Beach, California, stock point in June 1980, we found two engines worth $27,000 and one reduction gear worth $16,000 which were not on SICP inventory records but were being held, knowningly by the district, for its future needs. The holding of these parts removed any possibility of using them to fill a critical need in another district. In July 1980, another district needed the same type reduction gear we found stored at Long Beach. However, Long Beach officials told SICP they did not have a gear in stock. In contacting the manufacturer, Coast Guard officials found that the gear was no longer stocked and a special order would cost $36,000. After discussing our findings with SICP officials, they said they would check into the Long Beach matter.

Support of diesel engines for the 82-foot class patrol boats is another example where districts' parochial actions have adversely affected the system. For the 53 boats, there are no spare engines in RFI condition even though 32 (16 sets of 2 each) spare engines are reported in the repair cycle. According to the Coast Guard's small boat manager, this number of engines in the repair cycle exceeds the Coast Guard's overall estimated 82-foot boat's spare engine needs by 14 engines. Thus, at a unit price of about $46,000 each, the Coast Guard has spent $644,000 for 82-foot class diesel engine support in excess of estimated requirements.

Other classes of Coast Guard vessels have similar though less serious support problems with repairable parts. However, the result is the same, districts working around the system may have caused the Coast Guard to maintain larger inventories of some items than requirements warrant.

SICP LACKS DATA NEEDED TO IMPROVE AS THE CENTRAL LOGISTICS MANAGER

Before SICP can improve its management capabilities and operations, it needs better management information. Specifically it needs (1) accurate demand data so it knows what

parts to stock, (2) more information on not-RFI items in its inventory, and (3) accurate stock records.

A central inventory system can take advantage of quantity buys and ecomonical stockage levels by stocking parts which many districts use. To accomplish this, SICP needs accurate demand data so that it can analyze which parts are more economical for it to stock. However, it is not receiving such demand data because districts procure parts commercially without going through or informing SICP. District officials told us they do this because they know that SICP either does not have the item or cannot provide it in a timely manner.

Instead of taking actions to rectify this problem, Coast Guard officials are allowing the situation to deteriorate by permitting certain districts to manage engine parts. This removes additional parts from system visibility. For example, in April and May 1980, two Coast Guard districts contracted locally for Cummins engine parts used in many Coast Guard vessels because the central logistics system was not meeting their needs. Although local contracts are recognized as a potential source of repair parts, SICP should first be considered as the primary source. In these cases, neither Coast Guard headquarters nor SICP has taken any action to discourage similar local contracting.

SICP inventory in not-RFI condition has caused many problems, such as added repair costs and delays in vessel sailings. Yet SICP does not know the extent of the problems. Districts are supposed to report to SICP when they receive a part in not-RFI condition, but district officials told us they do not always do this because (1) they do not know what report to submit or (2) SICP has not acted on previous reports. At SICP, we found that SICP does not attempt to compile and analyze the reports it does receive.

We also found that SICP inventory records were inaccurate. SICP item managers did not know, with a sufficient degree of confidence, what quantities of repair parts were on hand at the Curtis Bay Coast Guard Yard and at the stock points because a complete physical inventory has never been made. SICP officials said they had not made a physical inventory because of the shortage of personnel and limited funds which prevented them from traveling to stock points. During our review, we randomly selected 109 line items to check stock record figures against the number of each item actually on hand at Portsmouth, Seattle, and Long Beach. Of the 109

items checked, 26 had inaccurate stock record balances. The parts that could not be accounted for had a value of more than $100,000.

We found one case where inaccurate stock records, in addition to the normal inventory problems associated with them, affected the Coast Guard's mission capability. In April 1980, an 82-foot cutter was out of service due to engine failure. Although a replacement engine was in stock and available, the stock records were inaccurate, and the vessel was delayed 2 days until an engine was located.

COAST GUARD HAS TAKEN SOME CORRECTIVE ACTIONS

The Coast Guard has taken some specific actions on problems addressed in this report and is also studying its overall logistics support plan. Coast Guard officials told us that they were aware that districts did not report the need for engines, but merely repaired unserviceable ones and used them as replacements. They were also aware of the problems of districts receiving parts in not-RFI status.

To correct the problem of districts hoarding engines and repairing them as they need them, the Coast Guard, in July 1980, started requiring that SICP simultaneously authorize a replacement engine to a district and provide the district instructions on where and when to send the replaced engine for repair. This instruction may provide that the district, with SICP authority, repair the engine itself. In addition, the Coast Guard has implemented specifications on winterizing engines and on engine accessories needed before engines are rated RFI. Coast Guard headquarters also has started a program to have Coast Guard-wide specifications written through a commercial contract.

In 1979 a Coast Guard committee, consisting of headquarters and SICP members, studied problems in its logistics support plan. In October 1979 the committee produced an "Action Plan to Improve SICP Support of the Fleet." The Coast Guard is considering the plan which identifies areas needing attention, describes potential solutions, and sets milestones for improvements.

The Coast Guard is considering the following solutions.

--Enforcement of expedient repair and return practices by headquarters which could make the current system adequately support the fleet.

--Assignment of repairs to central management and coordination of all aspects of parts maintenance by a single manager which could provide a workable support system.

Another alternative would be to officially give districts more discretion by assigning pools of spare parts for single district use and making each district responsible for maintaining an RFI inventory of spare parts.

CONCLUSIONS

Changes are needed to make the Coast Guard's vessel logistics system effective. Although the Coast Guard is studying its logistics problems, there are actions it can be taking now. We found that some of SICP's inventory is in not-RFI condition and that districts are maintaining intermediate inventories contrary to Coast Guard policy. These situations are occurring because (1) districts do not have the incentive to repair items before returning them to stock and (2) districts which retain inventories are not penalized. Districts retain inventories so that they do not have to rely on SICP, which has been unable to meet their needs. These independent actions, however, result in some districts not being able to obtain repair parts when needed and overall Coast Guard stocking of some equipment in excess of requirements.

Both these problems can be alleviated somewhat if the Coast Guard changes its procedures and starts charging for repair parts. Although SICP provides repair parts at no charge, it expects the replaced or worn parts to be repaired at district expense and to be returned to stock in RFI condition. Districts, however, are reluctant to use their own funds when they may not be the next user of the items. Since other districts also follow the same practice, the parts they receive later will likely need repair.

A better system would be for the Coast Guard to earmark some funds for repairing items to be returned to SICP inventory. SICP should then assume a wholesaler role and charge districts for SICP items and also credit districts for items returned and money spent to repair the returned items to RFI condition.

Changes in funding procedures above, however, will not solve all the problems being experienced. Still needed are

systemwide repair specifications and improved quality assurance and packaging and preservation programs. Otherwise, districts will not agree on whether items which they receive or repair and return meet RFI criteria.

If SICP is to function effectively as the central logistics manager, its management information must be improved. To respond to districts' needs, SICP must have accurate data on its stock and must be able to develop its inventory using demand data. Likewise, if SICP is to be effective in solving the problems of inventory in not-RFI status, it needs feedback data on the condition of items going into and out of its stock points.

The Coast Guard's study of its logistic support problems is commendable. Specific action is now needed if SICP, after 7 years existence, is to function effectively.

RECOMMENDATIONS

We recommend that the Secretary of Transportation direct the Coast Guard to improve its vessel logistics support program by having SICP

- --act as a wholesaler of repair parts and set up procedures whereby districts pay for parts and receive credit for parts returned and repairs performed,
- --make a physical inventory and update its stock records and implement procedures to obtain the management information it needs as the central logistics manager, and
- --develop systemwide repair specifications and improve its quality assurance and packaging and preservation programs.

AGENCY COMMENTS

The Department of Transportation stated that our report presented a true picture of the problems experienced by SICP in providing logistics support. The Coast Guard has recognized these problems and has instituted corrective actions. The first 29 standard repair specifications have been written, and standard repair specifications for the remaining 200 odd pieces of equipment are in various stages of preparation. Increased attention by SICP in the repair and return area, especially small boat engines, has shown an improvement in availability of RFI stock. SICP recognized the lack of an

accurate data base was hampering its operation, and action has been initiated to develop this required management information. The Department stated that expeditious resolution of the omissions in the SICP operation, which are cited by us, would require additional resources.

CHAPTER 3

GREATER USE OF MAINTENANCE CAPABILITIES OF OTHER GOVERNMENT AGENCIES WOULD BE BENEFICIAL

The Coast Guard can reduce maintenance costs by using other Government agencies' facilities. Although regulations require that the use of such interservice support be explored before contracting for services, the Coast Guard is using other agencies' vessel maintenance facilities only on a hit or miss basis. Yet the potential exists for greater use since these facilities have the capacity and are willing to do maintenance for the Coast Guard.

The Coast Guard has been reluctant to use other agencies' facilities because these facilities give its work a lower priority, control is lost over how and when the repairs are made, and the repair costs are sometimes higher than commercial contractors. However, these problems can be solved, and their solutions will allow the U.S. Government to benefit from lower overall maintenance costs.

INTERSERVICE SUPPORT IS BENEFICIAL

Interservice support is beneficial. It can reduce costs, improve productivity, and possibly, reduce the number of duplicate facilities. Federal Procurement Regulations and Coast Guard implementing instructions encourage interservice support. For example, the regulations state:

> "Before taking procurement action * * * agencies shall have complied with applicable laws and regulations relative to obtaining supplies or services from Government sources and from contracts of other Government agencies."

Further, during the 1980 hearings before the House Committee on Appropriations, Subcommittee on Transportation, 1/ the Coast Guard Commandant stated

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1/96th Congress, 1st sess., Subcommittee on Department of Transportation and Related Agencies Appropriations, part 3, p. 349.

"I want to assure you that we are committed to a policy of reliance on direct support from other Government sources where it is both practicable and economical from a mission response standpoint."

Also, it was the consensus of Coast Guard and other agencies' maintenance managers who believed that interservice vessel support has many benefits.

DOD recognizes benefits

Recognizing the potential for reducing base support costs, DOD and the military services established the Defense Retail Interservice Support (DRIS) Program. This program was established in 1972 to promote interservice consolidations among the military services. In establishing the program, DOD called for aggressive use of interservice support at all management and operating levels. Since 1972, DOD has saved about $45 million through more than 5,000 interservice support agreements.

To help meet the goals of the DRIS Program, DOD published two documents. One document, the DRIS Catalog of Support Services, assists military departments, defense agencies, overseas unified commands, and other Federal agencies/activities in maximizing interservice benefits. Among the suggested uses for this catalog are to:

--Provide local commanders a means of identifying DOD and non-DOD activities that can be contacted regarding specific type(s) of support services within their geographic areas.

--Maximize the use of support services available, thereby reducing, precluding, or minimizing the duplication of services among military services, defense agencies, and other Federal agencies.

The other document is the DRIS Single Points of Contact Directory. This directory assists activities seeking support services to identify the contact point at the agency having the desired services. The DRIS documents contain a great deal of information but do not provide the visibility needed to ensure that all productive areas for reducing costs are studied. For example, the catalog lists only those support services actually being supplied/received under the auspices of the DRIS Program. It does not identify the

entire universe of locally available services. For example, it does not list the Navy Intermediate Maintenance Activities in the Norfolk area nor does it list the closely located Coast Guard Support Center in Portsmouth, Virginia.

Another limiting factor is the lack of publicity given the DRIS Program. Most of the vessel maintenance personnel with whom we talked were not aware of the DRIS Program or the documents. This was true for vessel maintenance managers in the Coast Guard, Navy, Army Corps of Engineers, and National Oceanic and Atmospheric Administration.

INTERSERVICE SUPPORT WORKING IN SOME AREAS

The Coast Guard is using interservice support agreements in some areas because it has found they reduce costs. For example, the Coast Guard is extensively using interservice support for obtaining aircraft maintenance and general support services. However, the Coast Guard has used interservice support only to a limited extent for vessel maintenance.

The Coast Guard, with only one Aircraft Repair and Supply Center, extensively uses available Navy and Air Force maintenance facilities. This use of other agencies' maintenance services has not impaired the Coast Guard's abilities to carry out its assigned mission. Although problems are experienced at times, Coast Guard aircraft managers recognize interservice benefits and work with other agencies to solve the problems. Most problems are solved through interservice support agreements which are negotiated in advance.

Interservice agreements range from the entire supply support and overhaul of some aircraft to depot-level maintenance for specific parts. Even the engines for a Coast Guard-unique helicopter are overhauled by the Navy under an interservice agreement.

In addition to aircraft maintenance and supply, the Coast Guard uses interservice support agreements extensively to obtain other support services. In the three districts reviewed, we found the Coast Guard was receiving support from other Government agencies for such services as housing, grounds and facilities maintenance, and other related personnel support needs.

POTENTIAL EXISTS FOR GREATER USE OF INTERSERVICE SUPPORT FOR VESSEL MAINTENANCE

Although the Coast Guard uses some interservice support for vessel maintenance, the potential exists for greater use. Other Government maintenance facilities have the capacity to provide more support and the Coast Guard could also assist others. Also, factors which may be inhibiting greater interservice support can be overcome.

Examples where interservice support has worked

Several Coast Guard districts have demonstrated that they can occasionally use other Government maintenance facilities to meet their needs. However, the Coast Guard has not made a concerted effort to ensure that all activities or districts fully utilize this interservice support.

In cases where other agencies' facilities were used, the maintenance usually was performed successfully, and in many cases, at a cost considerably less than that charged by private contractors. For example, Navy Intermediate Maintenance Activities in the Norfolk area performed 11 repair jobs for the Coast Guard during calendar year 1979, 10 without charging for labor. Navy officials said they assisted the Coast Guard every time it contacted the appropriate office, and they did the work for several reasons. One was because the Coast Guard contacted the appropriate Navy activity which schedules work to tenders and Shore Intermediate Maintenance Activities in the Norfolk area. Secondly, the shops needed for the repairs were not overloaded at the time.

These same officials said one reason for not charging the Coast Guard for the work was the difficulty in billing. This difficulty was caused by a lack of an interservice support agreement for vessel maintenance between the two parties. As a result, there was not a simplified billing procedure available, and the officials believed it was not cost effective to prepare all the extra documents this omission necessitated. Thus, they suggested future interservice vessel maintenance would be expedited by establishing an interservice agreement between the parties which would include the appropriate contact points and the billing/paying instructions.

Another example of interservice support was in the 13th District. The district was contracting commercially for repair and calibration of precision maintenance equipment at an average cost of $181 for each action. They subsequently changed to having the Precision Measuring Equipment Laboratory at McChord Air Force Base, Washington, do the work. The average cost was reduced to about $29, a savings of $152 for each action. Further, the head of the district's Electronics and Electrical Engineering Branch, who was pleased with the Air Force's service, said it was much faster than commerical contractors.

Savings realized by one Coast Guard activity were not realized by others because they were not aware that the interservice potential existed. For example, the Coast Guard cutter Ingham's maintenance officer discovered through informal channels that the Norfolk area Navy Intermediate Maintenance Activity could perform "waterjet" service. This service uses high-pressure water to clean boilers faster and better than manual methods. The Ingham's maintenance officer contacted the Navy which did the work. The maintenance officer said the work was done quickly, saved the Coast Guard about $5,000, and freed the cutter's crew to do other needed maintenance. Since the district's engineers were not aware of this service, they could not advise other vessel engineers. For example, we found that vessel engineers from a similarly equipped cutter in the Norfolk area were not aware of this service and thus had not used it.

Capacity exists for more interservice support

While several Coast Guard districts were contracting for needed maintenance, Government facilities (particularly the Navy) located near the homeports of the Coast Guard vessels were not always fully used. In many cases, Navy facilities could have provided the maintenance support with no additional personnel or equipment. Other agencies which the Coast Guard could use or which could use the Coast Guard facilities include the Army Corps of Engineers and the National Oceanic and Atmospheric Administration.

For example, in the 5th District, we identified 44 examples between October 1978 and December 1979 where the district paid commerical contractors to perform repairs when closely located Navy facilities may have had available capacity in the needed skills. One particularly good facility where the Coast

Guard can receive interservice support is the Shore Intermediate Maintenance Activity Little Creek in Norfolk. This facility primarily supports amphibious ships, landing craft, and boats which participate yearly in two major exercises which takes many of them away from the homeport. During this period, the facility and its maintenance personnel are not always fully used. This situation is caused by the harbor's shallow channel draft which generally prevents large Navy vessels from entering for maintenance. However, all of the locally assigned Coast Guard vessels can use the channel. During the major exercises, the Navy Shore Intermediate Maintenance Activity performs work on ships in overhaul, ship-to-shop work, self maintenance, and training. Navy officials concluded, however, that Coast Guard work could be performed during this time period.

Navy data shows that tenders and Shore Intermediate Maintenance Activities of the U.S. Navy Surface Forces, Atlantic, had available maintenance capacity during fiscal year 1979. Navy officials said this capacity varied among different skills, depending on workload fluctuations. Thus, Navy facilities could not always provide the services the Coast Guard requested. However, with proper advance planning, these Navy facilities could help the Coast Guard.

By doing this work for the Coast Guard, the Navy maintenance personnel would be kept productively employed in their skills. Personnel have not always been so employed, as indicated in our prior report. 1/ This report found that intermediate maintenance activities personnel were often working outside their skill area. While we did not do any additional work to see if this situation has changed, we believe interservice can help to improve productivity.

If these and other Navy maintenance facilities had been used to do the 44 commercially contracted examples we identified, the Coast Guard could have saved over $47,000. Potential savings to the Coast Guard might be much higher, but we could not project these savings because of the differences among districts, such as the proximity and capabilities of other Government maintenance facilities.

1/"The Navy's Intermediate Ship Maintenance Program Can Be Improved" (LCD-77-412, Sept. 23, 1977).

For example, 7 of the 12 Coast Guard districts are near Navy vessel maintenance activities; the other 5 are not.

Further, we could not project potential savings because we did not quantify Coast Guard expenses for contracted services during 1979. Its decentralized purchasing authority inhibited this. District offices, groups, stations, support centers, and some large vessels have purchasing authority for supplies and services. The dollar authority ranges from $500 to $5,000 for purchases, while contracts are generally required for procurements over the $5,000 limit.

Other agencies could benefit also

In addition to the Coast Guard, other Government agencies could benefit from interservice support. Since our emphasis was on the Coast Guard, we did not identify all interservice potential. However, we did find the examples discussed below where other Government agencies could have benefitted by using Coast Guard facilities.

If the Norfolk District of the Army Corps of Engineers had called upon the Coast Guard's Support Center for the 41 instances where it contracted commercially for vessel and component repair, it could have received some interservice support. Use of the Support Center could have reduced commerical contracts by $5,000.

Further savings may be possible by combining the Army Corps of Engineers and the Coast Guard's buoy maintenance facilities in the Norfolk area. These facilities are located within 10 miles of each other. The Coast Guard's facility has more capability than the Corps, which can do only minor repair work.

The Atlantic Division of the National Oceanic and Atmospheric Administration could have also reduced its commercial contracts for vessel and component repair. Depending on skill availability, the Coast Guard's 5th District's Support Center could have done over $8,600 in repairs for the Division during fiscal year 1979.

Factors limiting interservice support can be overcome

Two factors--timeliness of repairs and cost--which the Coast Guard believes have limited the use of interservice support can be overcome. Interservice agreements negotiated in advance of maintenance requirements could go a long way toward eliminating potential roadblocks.

According to Coast Guard officials, the most important factor hindering interservice support has been the need for assurance that repairs will be done quickly. Timeliness is important because the Coast Guard has a limited number of vessels to meet its missions. Coast Guard officials said that in the past Government agencies were often slow in responding to its maintenance requests. Also, at times it is difficult to obtain a firm commitment from the agencies to have the maintenance done during a specific time frame because their own work takes priority. Further, it is usually difficult to find the one individual or office which can make the commitment for the agency without making numerous telephone inquiries. Thus, other Coast Guard officials believe the work can be done faster through commercial contracts.

Another factor is the potential cost increase to the Coast Guard. Various district officials cited examples where the Coast Guard had the work done by commercial contractors at less cost than having it done by other Government agencies.

While these factors have limited interservice support, we believe they can be overcome. By making an interservice agreement with another agency or agencies in advance, the parties can mutually agree on a priority system which can help prevent unacceptable delays. Also the interservice procedures and contact points can be established formally. While this will not ensure interservice support on all occasions, it will comply with regulations which require that the potential use of other Government facilities be fully explored before commercial services are used.

Additionally, while interservice support may cost the Coast Guard more, at times, it may actually be cheaper for the Government. Other Government agencies may already be paying personnel who may be working below full capacity. It would seem that in some cases, incremental costs could be charged to the Coast Guard to help facilitate interservice support to the Government's benefit.

CONCLUSIONS

The Coast Guard has successfully used interservice support for some programs--aircraft maintenance and general support services--and for some vessel maintenance. However, the Coast Guard can save maintenance money through greater use of vessel maintenance resources of other Government agencies.

Interservice support is possible because maintenance activities do not always operate at full capacity. For example, Navy Intermediate Maintenance Activities which are closely located to selected Coast Guard vessels often have available maintenance capacity in certain skills. Managers of these activities that we visited told us that they can do some maintenance for the Coast Guard if the Coast Guard contacts the proper individuals.

We found that the capabilities of other Government agencies were not being used by the Coast Guard partially because of a lack of information available on vessel maintenance capabilities within a given geographic area. The DRIS Program exists to develop this information, however, vessel maintenance personnel we talked to were not aware of the program. Also, as currently structured, the program may be limited.

In addition to the lack of information on capabilities available for interservice support, we found that some past interservice experiences may be hampering its greater use. Although there were successful uses of interservice support, there were also experiences, according to Coast Guard officials, where interservice support was not timely or was more expensive than commercial sources. Such problems can be partly solved through formal interservice agreements which are reached in advance of maintenance actions.

In addition to the Coast Guard's use of Navy facilities, we found instances where other Government agencies might have benefited by using Coast Guard facilities. While interservice support may not always be available, its use should be fully examined since Federal regulations require that the use of Government facilities be explored before commercial services are used.

RECOMMENDATIONS

To maximize the Coast Guard's current use of interservice vessel maintenance support and provide the information

needed to increase interservice support, we recommend that the Secretary of Transportation direct the Coast Guard to develop a catalog of services available by

--disseminating and updating information to all districts on vessel maintenance interservice support currently being used by some districts and

--developing an inventory of all Government maintenance activities within a given radius, for example, 50 miles of where Coast Guard vessels are stationed.

Also, to facilitate greater interservice support and achieve optimal use of resources, we recommend that the Secretary of Transportation, with the Secretary of Defense and heads of other Federal agencies, develop vessel maintenance interservice support agreements.

AGENCY COMMENTS

The Department of Transportation agreed to explore other Government agency maintenance facilities to develop an inventory of available facilities. The Department will disseminate the information to maintenance personnel to assist them in executing their maintenance workload. The Coast Guard agreed to use other Government facilities when the use would not interfere with planned operational missions and would be cost comparable.

DOD officials stated that the Navy is willing to establish interservice support agreements for vessel maintenance and any other applicable services in areas where Navy Shore Intermediate Maintenance Activities and Coast Guard stations are lcoated. They agreed that skill levels, operational scheduling, and port loading sometimes create potential periods of available shop capacity for undertaking Coast Guard maintenance. However, they said such opportunities might not be frequent.

APPENDIX I

U.S. Department of Transportation
Office of the Secretary of Transportation

Assistant Secretary for Administration

400 Seventh Street S.W.
Washington D.C. 20590

October 16, 1980

Mr. Henry Eschwege
Director
Community and Economic
Development Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Eschwege:

We have enclosed two copies of the Department of Transportation's (DOT) reply to the General Acconting Office (GAO) draft report, "Effective Management Of Ship Maintenance Would Allow The Coast Guard To Do More With Its Current Resources," dated September 15, 1980.

In May 1979, the Coast Guard (CG) reported to Congress that its resources fell short of the level necessary to adequately carry out its assigned tasks. While this may be true, GAO believes the CG could do more with its current vessel maintenance and support resources. The CG could realize economies and efficiencies in its own vessel logistics support program and could make greater use of other Government maintenance facilities.

The draft report on management of ship maintenance presents a true picture of the problems experienced by CG's Ships Inventory Control Point (SICP) in providing logistics support. The CG has recognized these problems and has instituted corrective action. Our position is discussed in detail in the enclosed statement.

Please let us know if we can be of further assistance.

Sincerely,

Karen D. Lee, for

Robert L. Fairman
Acting

Enclosures

APPENDIX I

DEPARTMENT OF TRANSPORTATION REPLY

TO

DRAFT GAO REPORT

ON

EFFECTIVE MANAGEMENT OF SHIP MAINTENANCE WOULD ALLOW THE COAST GUARD TO DO MORE WITH ITS CURRENT RESOURCES

SUMMARY OF GAO FINDINGS AND RECOMMENDATIONS:

The Coast Guard has reported to Congress that its resources fall short of the level necessary to carry out its assigned tasks. While this fact may be true, the Coast Guard could do more with its current vessel maintenance and support resources. The Coast Guard could realize economies and efficiencies in its own vessel logistics support program and could make greater use of other Government maintenance facilities.

DEPARTMENT OF TRANSPORTATION POSITION:

The draft report on management of ship maintenance presents a true picture of the problems experienced by the Ships Inventory Control Point (SICP) in providing logistics support. The Coast Guard has recognized these problems and has instituted corrective action. The first twenty-nine standard repair specifications have been written, and standard repair specifications for the remaining two hundred odd pieces of equipment are in various stages of preparation. Increased attention by the SICP in the repair and return area, especially small boat engines, has shown an improvement in availability of ready-for-issue stock. The SICP recognized the lack of an accurate data base was hampering its operation, and action has been initiated to develop this required management information. Expeditious resolution of the omissions in the SICP operation, which are cited by the GAO, will require additional resources. Exception is taken with the GAO discussion on how maintenance funds are allocated. The allocation to Coast Guard districts of maintenance funds is not solely based on the number and size of assigned vessels. The allocation process takes into consideration several inputs. These inputs are: (See GAO note)

- age of the vessel class
- past history of support level provided
- geographic location
- material condition relative to remainder of fleet
- level of equipment complexity
- level of assigned maintenance personnel.

GAO Note: On the basis of the information provided in these comments, we deleted our discussion that maintenance funds were allocated solely based on number and size of assigned vessels.

APPENDIX I

All of these inputs are used to determine the support level for a cutter class. This support level, in conjunction with the population of that cutter class assigned in a district, is used to determine the allocation of resources to be assigned to the district support manager. With the specific details on the material condition of the vessels assigned to that district, district decisions are made as to the specific support level actually applied to a given cutter. Since valid maintenance needs exceed available funding, an apportionment procedure must be used to achieve an equitable fund distribution. Contrary to the GAO report, the actual maintenance condition plays a large role in determining the cutter class allocation and therefore is a significant determinant of actual funds provided.

The possible utilization of Other Governmental Agency (OGA) maintenance facilities to perform maintenance work on Coast Guard vessels will be explored to develop location and type of capabilities, time period and amount of available capability, cost estimates, and local contact points. This information on available interagency maintenance capabilities will be disseminated to the districts to assist them in planning the execution of their maintenance workload. When the use of an OGA facility does not interfere with planned operational missions and the OGA is cost-comparable, Other Governmental Agency facilities would be used to perform maintenance on Coast Guard vessels.

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