

GAO

Report to the Honorable  
Owen B. Pickett  
House of Representatives

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February 1999

# NAVY SHIP MAINTENANCE

## Allocation of Ship Maintenance Work in the Norfolk, Virginia, Area



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

**National Security and  
International Affairs Division**

B-280524

February 24, 1999

The Honorable Owen B. Pickett  
House of Representatives

Dear Mr. Pickett:

Officials of private shipyards and ship repair companies in the Norfolk, Virginia, area have expressed concern about the Department of the Navy's declining ship maintenance workload in recent years. As you requested, we are providing information on the Navy's policies and procedures for allocating ship maintenance work to the Norfolk Naval Shipyard and private ship repair companies in the Norfolk, Virginia, area and data regarding funding obligated to the public and private sectors.<sup>1</sup> Specifically, this report discusses (1) the Navy's policies and procedures for allocating ship maintenance work to public and private facilities in the Norfolk area, (2) ship maintenance and modernization funding obligated to the Norfolk Naval Shipyard and private ship repair companies during fiscal years 1994 through 1998, and (3) the extent the Atlantic Fleet's ship maintenance program has been affected by the movement of funds out of the ship depot maintenance program since fiscal year 1994. Maintenance on nuclear-powered ships is referred to as nuclear ship maintenance, while maintenance on non-nuclear powered ships is referred to as conventional ship maintenance. Our scope and methodology are described in appendix I.

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## Results in Brief

The Navy's allocation of ship maintenance workload in the Norfolk, Virginia, area is guided by legislative requirements and established policy objectives, such as retaining a certain level of public sector capability, allowing sailors to remain at their home ports when shorter repairs are being done, and achieving economic and efficient public depot maintenance operations. During fiscal years 1994 through 1998, private shipyards and repair companies in the Norfolk, Virginia, area received proportionately more funding for ship maintenance work than the Navy's

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<sup>1</sup>The Norfolk Naval Shipyard is a Navy facility that provides repair and modernization to the entire range of naval ships. The Newport News Shipbuilding and Drydock Company is the largest privately owned shipyard in the United States. It is the only one that can build, refuel, and maintain Nimitz-class aircraft carriers and one of two that can build and maintain nuclear-powered submarines. Six other private shipyards in the area do repair work on conventional ships and about 30 other private companies do limited ship repair work at the Norfolk Naval Shipyard, other private shipyards, and their own facilities. Newport News and several of these private shipyards frequently perform ship maintenance work outside the Norfolk, Virginia, area.

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Norfolk Naval Shipyard.<sup>2</sup> Among the private sector activities, Newport News Shipbuilding and Drydock Company has received the largest portion of ship maintenance funding in the Norfolk area.<sup>3</sup> Funding obligated to other smaller shipyards and repair companies has fluctuated from year to year, with the greatest change occurring in fiscal year 1998 when these companies received proportionately much less of the annual ship maintenance funding than in other years and also received less than initially scheduled by the Navy. This was largely because (1) the conventional workload that traditionally goes to these companies is declining, (2) scheduled maintenance and operational requirements changed during fiscal year 1998, and (3) four conventional maintenance projects originally scheduled to go to the private sector were reassigned to the Norfolk Naval Shipyard to stabilize and achieve more economical and efficient operations at that public shipyard.<sup>4</sup>

The Navy did move appropriated funds from its ship depot maintenance account during fiscal years 1994 through 1998. However, the Atlantic Fleet received a slight increase over the amount budgeted for its ship depot maintenance program during this period. Consequently, the movement of ship depot maintenance funds did not reduce the amount of funds provided to the public and private sectors in the Norfolk, Virginia, area.

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## Background

The objective of the Navy's ship maintenance program is to perform all necessary maintenance consistent with available funding and provide reasonable assurance that ships will be available for required operations. Ship maintenance, conducted during periods the Navy calls availabilities, includes three types of requirements: time-directed, condition-based, and modernization. Time-directed requirements include those that are periodic in nature and are based on elapsed time or recurrent operations. Condition-based requirements, which are based on the physical condition of the ship, are usually identified by the ship's crew or inspection teams.

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<sup>2</sup>Measured by funds obligated each fiscal year. Department of Defense (DOD) regulations define obligations as amounts of orders placed, contracts awarded, services received, and similar transactions during an accounting period that will require payment.

<sup>3</sup>To provide a more meaningful analysis of workload allocation within the private sector, we separated smaller private shipyards and ship repair companies from Newport News because Newport News, specializing in major overhauls and nuclear ship maintenance projects, performs larger and different types of maintenance projects than the other smaller ship repair companies in the Norfolk area. We could not readily separate conventional ship work from nuclear ship work.

<sup>4</sup>The Navy issued a planning report, Private Sector Depot Level Planning Report for Fiscal Years 1997 and 1998, Naval Sea Systems Command Notice 4710 (Sept. 23, 1996), containing Chief of Naval Operations (CNO) conventional maintenance projects that were not yet funded but were tentatively planned for allocation to the private sector in the Norfolk area. This report was not a commitment to provide particular workload to industry but was meant more as a benchmark or informal planning tool for industry to gauge upcoming ship maintenance requirements that might be available for contracting.

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Lastly, modernization requirements include changes that either add new capability or improve reliability and maintainability of existing systems.

Officials of the Shipbuilders Council of America, the South Tidewater Association of Ship Repairers, private shipyards, and ship repair companies in the Norfolk area have expressed concern that the Navy's implementation of its policies and procedures favored the Norfolk Naval Shipyard, contributing to the private sectors' declining ship maintenance workload in the Norfolk area during fiscal year 1998.

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## Navy Policies and Procedures for Allocating Ship Maintenance Work in the Norfolk Area

The Navy's allocation of ship maintenance workload in the Norfolk, Virginia, area is guided by legislative requirements and established Navy policy objectives, such as (1) retaining a certain level of public sector capability, (2) allowing sailors to remain at their home ports when shorter repairs are being done, and (3) achieving economic and efficient public depot maintenance operations.

Historically, large ship dry-dockings and nuclear ship maintenance projects in the Norfolk, Virginia, area are usually allocated to either Newport News or the Norfolk Naval Shipyard and maintenance projects for conventional surface ships are usually contracted with private ship repair companies or allocated to Norfolk Naval Shipyard.<sup>5</sup> In addition, Newport News performs some medium to small conventional ship maintenance work for the Navy.

Further, in making workload allocation decisions, Navy officials stated they also consider:

- The statutory requirement of 10 U.S.C. 2466, more commonly called the 50-50 rule, wherein the Department of the Navy is required to contract not more than 50 percent of funds made available for depot-level maintenance with the private sector.<sup>6</sup> This requirement is for the whole Navy and applies to all types of depot maintenance at all locations. The 50-50 requirement excludes funds obligated for the (1) procurement of major modifications or upgrades of weapon systems that are designed to improve performance or (2) nuclear refueling of an aircraft carrier. To

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<sup>5</sup>Nuclear attack submarines may also be assigned to the Portsmouth Naval Shipyard at Kittery, Maine, and Electric Boat Company, at Groton, Connecticut.

<sup>6</sup>Until fiscal year 1998, the Navy was prohibited by statute (10 U.S.C. 2466) from placing more than 40 percent of its depot-level maintenance work in the private sector. In the 1998 Defense Authorization Act, this was amended to 50 percent.

more fully identify all sources of funding for ship maintenance and repair work in the Norfolk area, we included obligated funds for these activities in our analysis for this report.

- The Navy's home port policy is to, where possible, do ship repair and maintenance work of 6 months or less at the ship's home port, thus improving the ship crew's quality of life by reducing time away from home. If the estimated project is to take 6 months or less, the Navy solicits proposals for maintenance contracts from private shipyards and ship repair companies located near the ship's home port. If the estimate is more than 6 months, the Navy expands the solicitation to include additional ship repair companies operating on the coast—the Atlantic coast for the Atlantic Fleet.
- Core work requirements, where the Navy tries to maintain the required capabilities within organic Navy shipyards to meet readiness and sustainability requirements of the weapon systems that support the wartime and contingency scenarios. According to Navy documents, core capabilities consist of the minimum facilities, equipment, and skilled personnel necessary to meet these readiness and sustainability requirements.
- The Navy's guaranteed manday policy, where Navy officials try to match the workload to Norfolk Naval Shipyard workforce because the shipyard's workforce and related costs have already been committed in the Navy's budget.<sup>7</sup>

## Obligations for Ship Maintenance and Repair Work in the Norfolk Area

In terms of reported obligations for ship maintenance work in the Norfolk area during fiscal years 1994 through 1998, the largest amount of ship maintenance funding went to the private shipyards and repair companies.<sup>8</sup> Among the private sector activities, Newport News received the largest portion of the obligated funds. Reported obligations for the smaller private shipyards and repair companies fluctuated from year to year but, for a

<sup>7</sup>The Norfolk Naval Shipyard's workload targets are established under the Navy's guaranteed manday policy, where work days budgeted for Norfolk Naval Shipyard are guaranteed by its customers (fleet and system commanders) during the budget execution year. During the budget process, Norfolk Naval Shipyard's workload and workforce are established and locked in the budget. Consequently, during the budget execution year, the Navy's guaranteed manday policy is to ensure the agreed to workload (or equivalent) is provided to Norfolk Naval Shipyard's workforce because the workforce figures and related costs have already been committed in the budget. For several reasons, primarily operational commitments, ship schedules may change. Thus, when a ship maintenance project is moved out of the public shipyard, it may be necessary to provide the public shipyard with an equivalent workload.

<sup>8</sup>Our audit of the federal government's fiscal year 1997 consolidated financial statements identified billions of dollars in DOD unreconciled cash disbursements. As a result of these accounting problems, DOD has not recorded all obligations and expenditures to specific budgetary accounts. See *Financial Audit: 1997 Consolidated Financial Statements of the United States Government* (GAO/AIMD-98-127, Mar. 31, 1998).

variety of reasons, were proportionately much less in fiscal year 1998 than in other recent years and were also less than the Navy initially scheduled for fiscal year 1998.

**Amount of Funds Obligated Between the Public and Private Sectors**

During fiscal years 1994 through 1998, the Navy reported obligating nearly \$6.9 billion for the ship maintenance work in the Norfolk area. It provided Norfolk Naval Shipyard with about 31.1 percent of this work and private shipyards and repair companies were allocated 68.9 percent. (See table 1.)

**Table 1: Reported Obligations for Ship Maintenance Work Provided to Norfolk Naval Shipyard and Private Shipyards and Repair Companies in the Norfolk Area During Fiscal Years 1994 Through 1998**

Then-year dollars in millions

Fiscal year	Obligations for work provided to Norfolk Naval Shipyard <sup>a</sup>		Obligations for work provided to the private shipyards and repair companies		Total
	Amount	Percent of total	Amount	Percent of total	
1994	\$417.5	30.7	\$942.7	69.3	<b>\$1,360.2</b>
1995	428.8	30.4	980.7	69.6	<b>1,409.5</b>
1996	419.3	47.6	462.2	52.4	<b>881.5</b>
1997	373.3	31.6	809.9	68.5	<b>1,183.2</b>
1998	508.4	24.6	1,554.8	75.4	<b>2,063.2</b>
<b>Percent of total</b>		<b>31.1</b>		<b>68.9</b>	

Note: Obligations are for maintenance, modernization, materials, and nuclear refueling work provided to the Norfolk Naval Shipyard, Newport News, and other smaller ship repair companies. Dollar amounts do not include obligations for ship maintenance work performed outside the Norfolk, Virginia, area.

<sup>a</sup>Dollar amounts do not include work (approximately \$63.7 million) the Norfolk Naval Shipyard contracted out to private ship repair companies. These amounts are included in the obligations for work provided to private shipyards and repair companies.

Source: Our analysis of obligation data provided by the Navy Comptroller, CNO, the Atlantic Fleet, and Military Sealift Command (MSC).

Table 1 also shows that reported obligations for fiscal year 1998 were much higher than previous years, with the largest percentage obligated to private shipyards and repair companies. Most of the 1998 obligations went to Newport News to fund a complex overhaul and nuclear refueling of the U.S.S. Nimitz. In the years in which Newport News has such a large workload, major funding spikes occur. In contrast, there was no similar workload assigned to Newport News in fiscal year 1996. Navy officials told us that funding to Newport News was smaller in 1996 because (1) there

was less nuclear ship maintenance work—work historically allocated to either Newport News or Norfolk Naval Shipyard and (2) Newport News was already operating near full capacity.

### Distribution of Reported Obligations Among Private Shipyards and Repair Companies

Newport News is a large nuclear-capable yard and is capable of doing ship repair work that other smaller shipyards and repair companies in the Norfolk area are not. Smaller private shipyards and repair companies in the area do repair work on conventional ships and are not qualified to do nuclear-related work. Therefore, to make our private sector analysis more meaningful, we separated the Navy’s reported obligations according to whether they were provided to Norfolk Naval Shipyard, Newport News, or other smaller shipyards and repair companies. As shown in table 2, Newport News received the largest obligations in all but 1 year between fiscal year 1994 and 1998.

**Table 2: Reported Obligations for Ship Maintenance Work Provided to Norfolk Naval Shipyard, Newport News, and Smaller Private Shipyards and Repair Companies in the Norfolk Area During Fiscal Years 1994 Through 1998**

Then-year dollars in millions

Fiscal year	Obligations for work provided to the Norfolk Naval Shipyard <sup>a</sup>		Obligations for work provided to the private sector			
	Amount	Percent of total	Newport News		Smaller ship repair companies <sup>b</sup>	
			Amount	Percent of total	Amount	Percent of total
1994	\$417.5	30.7	\$681.6	50.1	\$261.1	19.2
1995	428.8	30.4	552.1	39.2	428.6	30.4
1996	419.3	47.6	230.8	26.2	231.4	26.3
1997	373.3	31.6	546.6	46.2	263.3	22.3
1998	508.4	24.6	1,345.1	65.2	209.7	10.2
<b>Percent of total</b>		<b>31.1</b>		<b>48.7</b>		<b>20.2</b>

Note: Obligations are for maintenance, modernization, materials, and nuclear refueling work provided to the Norfolk Naval Shipyard, Newport News, and other smaller private ship repair companies. Dollar amounts do not include obligations for ship maintenance work performed outside the Norfolk, Virginia, area.

<sup>a</sup>Dollar amounts do not include work (approximately \$63.7 million) the Norfolk Naval Shipyard contracted out to private ship repair companies. These amounts are included in the obligations for work provided to private shipyards and repair companies.

<sup>b</sup>Smaller private shipyards and repair companies do repair work on conventional ships and are not qualified to do nuclear-related work.

Source: Our analysis of obligation data provided by the Navy Comptroller, CNO, the Atlantic Fleet, and MSC.



Table 2 also shows that the smaller private shipyards and repair companies received a much lower percentage of the total obligations in fiscal year 1998 than in other years. There was less conventional ship maintenance work—work historically allocated to smaller shipyards and repair companies or to the Norfolk Naval Shipyard. For example, the Navy reported that the total number of ships in the Atlantic Fleet decreased from 191 in fiscal year 1994 to 165 in fiscal year 1998. Similarly, the reported number of conventional steam-powered ships, maintenance-intensive ships that smaller ship repair companies have historically worked on, decreased in the Atlantic Fleet from 38 to 26 between fiscal year 1994 and 1997, and was projected to decrease to 23 ships during fiscal year 1998. According to Navy officials, conventional steam-powered ships require more maintenance than other ships because they are older and contain more mechanical parts than newer ships, which have more reliable component systems that are easier to remove, replace with new component systems, and repair elsewhere.

### Private Shipyards and Repair Companies Received Less CNO Maintenance Work Than Initially Scheduled in Fiscal Year 1998

During fiscal year 1998, the Navy provided the smaller private shipyards and repair companies in the Norfolk area less conventional maintenance work than initially scheduled in its private sector planning report dated September 23, 1996.<sup>9</sup> This change occurred largely for operational reasons and requirement changes and because four conventional maintenance projects originally scheduled to go to the private sector were reassigned to the Norfolk Naval Shipyard to meet workload targets established for the public shipyard under the Navy's guaranteed manday policy. Appendix III details the final distribution of the CNO projects scheduled for fiscal year 1998.

In September 1996, Naval Sea Systems Command (NAVSEA) issued the Navy's private sector depot-level planning report for fiscal years 1997 and 1998.<sup>10</sup> The report contained CNO conventional maintenance projects that were not yet funded but were tentatively planned for allocation to the private shipyards and repair companies in the Norfolk area in fiscal

<sup>9</sup>Historically, the Navy has issued such a planning report projecting its requirements for the upcoming 2 fiscal years in the spring prior to initial year, thus providing the ship repair companies more than 15 months to plan for the later fiscal year. The Navy eliminated the report in 1997 because it was misinterpreted by the private sector as representing the Navy's approved and funded CNO ship maintenance schedule. Instead, the Navy now issues a 1-year CNO ship maintenance and emergent mandays schedule that has been approved and funded, and posts the schedule on the Navy's web site at the beginning of each fiscal year. Officials of ship repair companies told us that the schedule is posted too late under the Navy's current process to be used in their planning cycle.

<sup>10</sup>Private Sector Depot Level Planning Report for Fiscal Years 1997 and 1998, NAVSEA Notice 4710 (Sept. 23, 1996).

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years 1997 and 1998. Navy officials told us that the unfunded schedule was recognized as being subject to change and changes did subsequently occur. Nonetheless, some private shipyards and repair companies expected to receive larger amounts of work than they ultimately obtained because of the information in the report.

In fiscal year 1998, the Navy reduced the size of the maintenance package for seven CNO maintenance projects and deferred one CNO project to fiscal year 1999 because several ships scheduled for maintenance needed less maintenance than expected and other Atlantic Fleet ships needed more maintenance than scheduled, requiring the Navy to transfer additional ship maintenance funds to those projects. In addition, the Navy canceled three scheduled projects: the U.S.S. Roberts project was canceled because the ship needed less maintenance than expected, the U.S.S. Radford project was canceled because the ship had operational commitments, and the U.S.S. Guam project was canceled because the ship was decommissioned in August 1998.<sup>11</sup>

During fiscal year 1998, the Navy also assigned the Norfolk Naval Shipyard four CNO maintenance projects, initially scheduled for competition in the private sector. This was done to meet workload targets established for Norfolk Naval Shipyard under the Navy's guaranteed manday policy. The objective of the Navy's guaranteed manday policy is to match the workload to Norfolk Naval Shipyard's workforce during the budget execution year since the shipyard's workforce figures and related costs have already been committed in the Navy's budget and workload reductions would result in losses.<sup>12</sup> Based on previous work, we believe that the guaranteed manday policy is generally sound from a cost and operational standpoint because, without it, the Norfolk Naval Shipyard would lose money as a result of having work below the level required to support its budgeted workforce.<sup>13</sup>

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<sup>11</sup>In addition to the Norfolk area, other geographic regions experience descope, deferred, and canceled CNO maintenance projects.

<sup>12</sup>Guidance for the Execution of Program Funds at Naval Shipyards, CNO Instruction 7130.8 (Apr. 5, 1996).

<sup>13</sup>Navy Ship Maintenance: Temporary Duty Assignments of Temporarily Excess Shipyard Personnel Are Reasonable (GAO/NSIAD-98-93, Apr. 21, 1998).

Prior to fiscal year 1995, the Navy's shipyards reported significant operating losses.<sup>14</sup> These losses were partly due to (1) fleet and system commanders' operational and administrative decisions that resulted in less work being assigned to the public shipyards than was projected and budgeted for and (2) the Navy's lack of flexibility to quickly deviate from the budgeted workforce because of Federal Civil Service requirements that require workers be notified before they can be separated. To minimize future departures from the budgeted workload, the Navy implemented the guaranteed manday program. When it is determined that the number of mandays originally budgeted for the Norfolk Naval Shipyard will not be utilized, officials of CNO, NAVSEA, the Atlantic Fleet, and Norfolk Naval Shipyard work together to identify alternatives for realigning the maintenance workload to better utilize the Norfolk Naval Shipyard budgeted workforce. These alternatives include adjusting the scope of work for selected maintenance projects, shifting funding from other Navy programs to ship maintenance, and moving planned workload from private shipyards and repair companies to Norfolk Naval Shipyard. We believe these initiatives are consistent with Navy policies and without them the Norfolk Naval Shipyard would lose money as a result of having work below the level required to support its budgeted workforce.

## Movement of Funds Had Relatively Little Effect on the Atlantic Fleet's Ship Depot Maintenance Program

During fiscal years 1994 through 1998, the Navy transferred or reprogrammed appropriated funds into and out of its ship depot maintenance program.<sup>15</sup> However, the amounts transferred or reprogrammed out of the Navy-wide ship depot maintenance program generally did not adversely affect the Atlantic Fleet's ship depot maintenance program, where more funds were transferred or reprogrammed into the program than were moved out.

During fiscal years 1994 through 1998, the Navy transferred or reprogrammed about \$1.2 billion (about 10 percent of the total) appropriated for its ship depot maintenance program to other Navy programs. The majority of the transfers or reprogrammings were due to one-time adjustments—changes that reflected the Navy's decisions to

<sup>14</sup>Repair activities at public shipyards are financed through the Navy's Working Capital Fund. Under the working capital fund concept, activities sustain their operations by charging their customers for goods and services based on predetermined rates designed to recover the costs of operations. These rates are often established up to 18 months in advance of their use for a given year as part of an agency's budget planning process. Working capital fund activities are not expected to incur profits or losses, but to break even.

<sup>15</sup>Transfers are when funds are moved from one budget account to another and reprogrammings are when funds are switched from one activity to another within the same account.

move funds to and from various Navy accounts based on emerging or unforeseen requirements. The Navy made these adjustments because of (1) force structure reductions, (2) operations tempo increases, (3) increased recruiting goals, and (4) administrative support needs.<sup>16</sup>

Although there was a Navy-wide reduction in appropriated ship depot maintenance funds due to program transfers or reprogrammings, the reverse occurred in the Atlantic Fleet. During fiscal years 1994 through 1998, these transfers produced a net increase in the Atlantic Fleet’s ship maintenance funding. An analysis of the Fleet’s data by fiscal year shows only 1 year where a net decrease to the program occurred—during fiscal year 1998 when the Navy moved \$7.1 million (less than 1 percent) of the Atlantic Fleet’s ship maintenance funds to other programs. (See table 3.)

**Table 3: Status of Annual Appropriations Allocated for Ship Depot Maintenance in the Atlantic Fleet for Fiscal Years 1994 Through 1998**

Then-year dollars in millions

Fiscal year	Appropriations allocated for Atlantic Fleet ship depot maintenance <sup>a</sup>	Obligation authority transferred to and from Atlantic Fleet ship depot maintenance <sup>b</sup>	Final obligation authority for Atlantic Fleet ship depot maintenance
1994	\$930.6	+\$20.1	\$950.7
1995	1,237.3	+89.3	1,326.6
1996	971.0	+27.1	998.1
1997	997.4	+15.0	1,012.4
1998	913.7	-7.1	906.6
<b>Total</b>	<b>\$5,050.0</b>	<b>+\$158.6</b>	<b>\$5,194.4</b>

<sup>a</sup>Appropriated amount is the dollar amount appropriated, adjusted by congressional actions in the applicable appropriation laws.

<sup>b</sup>The “+” indicates a transfer into the Atlantic Fleet’s ship depot maintenance program; “-” indicates a transfer out of the Atlantic Fleet’s ship depot maintenance program.

Source: Our analysis of Navy’s justification of budget estimates for fiscal years 1994 through 1999 and funding data provided by the Navy Comptroller’s Office, CNO, and the Atlantic Fleet.

## Conclusions

The allocation of ship maintenance workload in the Norfolk, Virginia, area is guided by legislative requirements and established Navy policy objectives. During fiscal years 1994 through 1998, the majority of ship maintenance funding allocated in the Norfolk area went to the private sector. While Newport News received the largest portion of that private

<sup>16</sup>Operations tempo increases included the costs of increasing fuel requirements and deploying four additional aircraft carriers to the Arabian Gulf. Increased recruiting goals included costs to support increased infrastructure for accession, retention, and training goals.

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funding, obligations to other smaller shipyards and repair companies have fluctuated from year to year. The greatest change occurred in fiscal year 1998, when these smaller companies received less than in other years and less than the Navy initially scheduled. This was largely because the conventional workload that traditionally goes to these companies is declining, scheduled maintenance and operational requirements changed during fiscal year 1998, and four conventional maintenance projects originally scheduled to go to the private sector were reassigned to the Norfolk Naval Shipyard to stabilize and achieve more efficient operations at the public shipyard. Lastly, while the Navy did reprogram ship depot maintenance funds to meet other priorities, the Atlantic Fleet's ship depot maintenance program was not adversely affected because it received a slight increase over the amount budgeted during fiscal years 1994 through 1998.

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## Agency Comments


We requested comments on a draft of this report from the Secretary of Defense. On January 21, 1999, DOD and NAVSEA officials said that they concurred with the report. Additionally, on February 1, 1999, Atlantic Fleet officials stated that the Fleet concurred with the report.

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We are sending copies of this report to the Chairmen and Ranking Members, Senate Committees on Armed Services and on Appropriations, and the House Committees on National Security and on Appropriations; the Secretaries of Defense and the Navy; and Director, Office of Management and Budget. We will also make copies available to others upon request.

Please contact me on (202) 512-8412 if you or your staff have any questions concerning the report. Major contributors to this report are listed in appendix IV.

Sincerely yours,



David R. Warren, Director  
Defense Management Issues

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**Abbreviations**

CNO	Chief of Naval Operations
DOD	Department of Defense
MSC	Military Sealift Command
NAVSEA	Naval Sea Systems Command
SUPSHIP	Supervisor of Shipbuilding, Conversion, and Repair

# Scope and Methodology

During our review, we interviewed and obtained data from Department of Navy officials, including from the Office of the Assistant Secretary of the Navy for Research, Development, and Acquisition; Office of the Assistant Secretary of Navy for Financial Management and Comptroller; Office of the Deputy Chief of Naval Operations for Logistics; the Naval Sea Systems Command (NAVSEA); the Supervisor of Shipbuilding (SUPSHIP) Portsmouth; SUPSHIP-Newport News; the Atlantic Fleet; the Military Sealift Command (MSC); and the Norfolk Naval Shipyard. We also obtained data from the Department of Defense (DOD) Inspector General. In the private shipbuilding and repair industry, we interviewed industry officials of the Shipbuilders Council of America; the South Tidewater Association of Ship Repairers; Master Ship Repair Agreement (Master Ship Repair) shipyards;<sup>1</sup> and Agreement for Boat Repair (Boat Repair) companies<sup>2</sup> in the Norfolk area. Table I.1 lists the master ship repair and boat repair companies we visited.

**Table I.1: Listing of Master Ship Repair and Boat Repair Companies We Visited**

Master Ship Repair companies	Boat Repair companies
Colonna's Shipyard, Inc.	Associated Naval Architect
Earl Industries, Inc.	Atlantic Ordnance and Gyro, Inc.
Marine Hydraulics International, Inc.	Davis Boat Works, Inc.
Metro Machine	Holmes Brothers Enterprises, Inc.
Moon Engineering	Lyon Shipyard, Inc.
Newport News Shipbuilding and Drydock Company (Newport News)	Pure Water Technologies, Inc.
Norfolk Shipbuilding and Drydock Corporation	Technico Corporation
	Xenotechnix Corporation

We identified and reviewed DOD and Navy policies and instructions that influence the allocation of ship maintenance work to public and private ship repair facilities. Additionally, we interviewed Navy officials to identify how the Navy actually implemented its policies and procedures in the Norfolk area during fiscal years 1997 and 1998. We interviewed also Navy and industry officials to determine the reason for any variances, and concerns that may exist with the Navy's current policies and procedures.

<sup>1</sup>Master Ship Repair companies perform complex ship repair and overhaul work similar to the type of work performed by Norfolk Naval Shipyard, usually at their own facilities.

<sup>2</sup>Boat Repair companies perform boat and craft repair work and noncomplex work on Navy ships, usually at Norfolk Naval Shipyard rather than their own facilities.



To identify the level of ship maintenance work allocated to the Norfolk Naval Shipyard and the private sector during fiscal years 1994 through 1998, we focused on identifying all sources of funding for ship maintenance work in the Norfolk area, including CNO maintenance projects, emergent and miscellaneous availabilities, modernization projects, and MSC projects. To identify obligations for these funding sources, we used funding data from Navy budget documents, program plans, and ship maintenance schedules.

Using reported obligations to measure completed ship maintenance work, we performed two data analyses to provide a more effective comparison of the maintenance work done by Norfolk Naval Shipyard and private ship repair companies. First, we determined and analyzed reported obligations for ship maintenance work allocated to Norfolk Naval Shipyard and the private sector during fiscal years 1994 through 1998. Second, we separated reported obligations for Newport News from the other smaller shipyards and repair companies in the Norfolk area because Newport News, specializing in nuclear refueling and major overhauls, performs larger and different types of maintenance projects than the other shipyards and repair companies. For the purposes of this review, this separation provided a more meaningful comparison of maintenance workloads allocated to Norfolk Naval Shipyard, Newport News, and other smaller private shipyards and repair companies during fiscal years 1994 through 1998. We could not readily separate conventional ship work from nuclear ship work. We did not verify the validity of the Navy's ship maintenance and repair requirements in the Norfolk area.

To contrast the level of scheduled and actual ship maintenance work completed by private shipyards and repair companies in the Norfolk area during fiscal year 1998, we focused on comparing the Navy's schedule of CNO maintenance projects with actual projects provided to the private sector. We examined Navy planning documents, including the Navy's schedule of CNO maintenance projects and the NAVSEA Notice 4710, entitled Private Sector Depot Level Planning Report for Fiscal Years 1997 and 1998. The 4710 notice contained the CNO availabilities scheduled for the private sector and specified solicitation area, contract type, solicitation method, and milestones for 1998 maintenance projects. We examined NAVSEA and Atlantic Fleet data that identified completed CNO maintenance projects during fiscal year 1998 and where the work was performed. We compared and analyzed the Navy's schedules of CNO maintenance projects with actual projects completed by the private shipyards and repair companies in the Norfolk area during this year to identify variances. We discussed

variances with NAVSEA and Atlantic Fleet officials to determine the reasons some of these scheduled maintenance projects were descoped, canceled, or transferred.

To identify the extent to which ship maintenance workloads in the Norfolk area were affected by the migration of funding from the ship depot maintenance program since fiscal year 1994, we examined a variety of Navy budget documents. We examined and analyzed the budget request, appropriated, current estimate, and actual obligated funding levels during fiscal years 1994 through 1998, for Navy-wide and Atlantic Fleet ship depot maintenance programs. We identified and analyzed the differences between the annual appropriated, current estimate, and actual obligated funding levels for ship depot maintenance. We interviewed Navy officials and examined Navy documents to determine the reasons for differences and their impact on the ship depot maintenance program in the Norfolk area.

In performing this review, we used the same budget and accounting systems, reports, and statistics DOD and the Navy use to manage and monitor their ship depot maintenance program. Dollars amounts shown in the report are the Navy's reported obligations to ship repair and maintenance facilities in the Norfolk area and do not reflect actual distribution of funds. We did not independently determine the reliability of the reported obligation information. However, our recent audit of the federal government's financial statements, including DOD's and the Navy's statements, questioned the reliability of reported obligation information because not all obligations and expenditures are recorded to specific budgetary accounts.

We conducted our review from June 1998 to January 1999 in accordance with generally accepted government auditing standards.

# Reported Obligations for Ship Maintenance Work Provided to Norfolk Naval Shipyard, Newport News, and Other Smaller Private Shipyards and Repair Companies

Reported obligations for ship maintenance work provided to the Norfolk Naval Shipyard, Newport News, and other smaller private shipyards and repair facilities during fiscal years 1994 and 1998 are presented in the following tables.

**Table II.1: Reported Obligations for Ship Maintenance Work Provided to the Norfolk Naval Shipyard for Fiscal Years 1994 Through 1998**

Dollars in millions

<b>Fiscal year</b>	<b>CNO maintenance work</b>	<b>Fleet maintenance work</b>	<b>Other Navy maintenance work</b>	<b>Less Norfolk Naval Shipyard work contracted to private ship repair companies<sup>a</sup></b>	<b>Total obligations</b>
1994	\$194.3	\$59.0	\$168.7	(\$4.5)	<b>\$417.5</b>
1995	208.3	96.7	131.5	(7.7)	<b>428.8</b>
1996	244.7	111.8	73.0	(10.2)	<b>419.3</b>
1997	183.3	122.7	78.6	(11.4)	<b>373.3</b>
1998	267.9	119.1	151.3	(29.9)	<b>508.4</b>

Note: Obligations are for maintenance, modernization, materials, and nuclear refueling work provided to the Norfolk Naval Shipyard.

<sup>a</sup>Total funding for Norfolk Naval Shipyard work contracted to Newport News and other smaller private ship repair companies.

Source: Our analysis of obligation data provided by the Navy Comptroller, the Chief of Naval Operations (CNO), the Atlantic Fleet, and MSC.

**Appendix II  
Reported Obligations for Ship Maintenance  
Work Provided to Norfolk Naval Shipyard,  
Newport News, and Other Smaller Private  
Shipyards and Repair Companies**

**Table II.2: Reported Obligations for Ship Maintenance Work Provided to Newport News for Fiscal Years 1994 Through 1998**

Dollars in millions

<b>Fiscal year</b>	<b>CNO maintenance work</b>	<b>Fleet maintenance work</b>	<b>MSC maintenance work</b>	<b>Norfolk Naval Shipyard maintenance work</b>	<b>Other Navy maintenance work</b>	<b>Total obligations</b>
1994	\$55.0	\$26.4	\$570.0	\$1.4	\$28.8	\$681.6
1995	495.1	8.5	0	0.8	47.7	552.1
1996 <sup>a</sup>	27.9	28.4	0	0.1	174.4	230.8
1997	247.6	3.8	0	0.1	295.1	546.6
1998 <sup>b</sup>	7.0	47.3	0	1.8	1,289.0	1,345.1

Note: Obligations are for maintenance, modernization, materials, and nuclear refueling work provided to Newport News. Dollar amounts do not include obligations for ship maintenance work performed outside the Norfolk, Virginia, area.

<sup>a</sup>According to Navy officials, the Navy obligated Newport News less of the ship maintenance program in fiscal year 1996 than any other year during this period because there was less nuclear ship maintenance work, historically allocated to Newport News or Norfolk Naval Shipyard.

<sup>b</sup>Most of the reported obligations for ship maintenance work provided to Newport News in fiscal year 1998, nearly \$1.3 billion, was for a complex overhaul and nuclear refueling of the U.S.S. Nimitz.

Source: Our analysis of obligation data provided by the Navy Comptroller, CNO, the Atlantic Fleet, and MSC.

**Table II.3: Reported Obligations for Ship Maintenance Work Provided to Smaller Private Shipyards and Repair Companies, Excluding Newport News, for Fiscal Years 1994 Through 1998**

Dollars in millions

<b>Fiscal year</b>	<b>CNO maintenance work</b>	<b>Fleet maintenance work</b>	<b>MSC maintenance work</b>	<b>Norfolk Naval Shipyard maintenance work</b>	<b>Other Navy maintenance work</b>	<b>Total obligations</b>
1994	\$73.1	\$50.0	\$75.1	\$3.1	\$59.8	<b>\$261.1</b>
1995	132.1	72.5	116.0	6.9	101.1	<b>428.6</b>
1996	101.5	36.7	35.8	10.1	47.3	<b>231.4</b>
1997	74.3	55.9	70.9	11.3	50.9	<b>263.3</b>
1998	44.5	86.5	33.8	28.1	16.8	<b>209.7</b>

Note 1: Obligations are for maintenance, modernization, and materials work provided to the smaller private ship repair companies in the Norfolk area. Dollar amounts do not include obligations for ship maintenance work performed outside the Norfolk, Virginia, area.

Note 2: Smaller private shipyards and repair companies do repair work on conventional ships and are not qualified to do nuclear-related work.

Source: Our analysis of obligation data provided by the Navy Comptroller, CNO, the Atlantic Fleet, and MSC.

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**Appendix II**  
**Reported Obligations for Ship Maintenance**  
**Work Provided to Norfolk Naval Shipyard,**  
**Newport News, and Other Smaller Private**  
**Shipyards and Repair Companies**

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In discussing the previous data with Navy officials, we were told that:

- CNO maintenance projects declined significantly after peaking in fiscal year 1995.<sup>1</sup> According to Navy officials, obligations for CNO maintenance projects provided to smaller ship repair companies declined significantly. They said that the decline in requirements since 1995 was due primarily to the decreasing numbers of ships in the Atlantic Fleet, including steam-powered ships, which have historically been allocated to smaller ship repair companies. The Navy also reduced the size of 19 CNO maintenance projects scheduled for private shipyards and repair companies in fiscal years 1997 and 1998. Further, during fiscal year 1998, the Navy deferred one and canceled three scheduled CNO projects due to changing maintenance requirements and priorities and transferred four projects to Norfolk Naval Shipyard to meet workload targets established under its guaranteed manday policy.
- According to Navy officials, obligations for ship maintenance projects fluctuated during the period because their requirements historically vary from year-to-year.<sup>2</sup> Additionally, reported obligations for Fleet maintenance projects peaked in fiscal year 1998 because the Navy reduced the size of the maintenance package for several CNO projects that were reclassified as Fleet maintenance projects, thus increasing the number of Fleet projects and related obligations.
- Historically, maintenance workload requirements for MSC ships fluctuate from year-to-year and the variances between 1994 and 1998 were typical.
- Norfolk Naval Shipyard work contracted to ship repair companies increased steadily during fiscal years 1994 through 1998. Likewise, during this period, the Norfolk Naval Shipyard gradually increased its use of temporary contract workers to complete ship maintenance projects. According to Navy officials, in selected cases it is cost-effective for Norfolk Naval Shipyard to contract with private shipyards and repair companies for skilled workers during periods of need rather than employing them full-time as Norfolk Naval Shipyard employees. Additionally, decreased personnel ceilings in the Navy have limited the naval shipyards' workforce.
- Obligations for other ship maintenance work, which includes ship modernization projects, fluctuated during the period because the Navy contracted with smaller private shipyards and repair companies for

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<sup>1</sup>CNO maintenance projects include depot-level maintenance that require skills or facilities beyond those of the Navy's organizational and intermediate maintenance levels and is performed by public and private shipyards and repair activities.

<sup>2</sup>Fleet maintenance projects include emergent, restricted, technical, and miscellaneous maintenance projects to complete specific items of work during a short, labor-intensive time frame.

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**Appendix II  
Reported Obligations for Ship Maintenance  
Work Provided to Norfolk Naval Shipyard,  
Newport News, and Other Smaller Private  
Shipyards and Repair Companies**

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installation of vertical launch systems in fiscal years 1994 and 1995 and pollution abatement systems in fiscal year 1997. Further, Navy officials said that funding requirements for the Navy's modernization program have gradually declined as older ships were decommissioned and newer ships deployed.

# Distribution of CNO Maintenance Projects Scheduled for the Private Sector in Fiscal Year 1998

Ship	Provided to the private ship repair companies			Canceled	Diverted to the Norfolk Naval Shipyard
	No significant change in scope	Descoped	Deferred		
U.S.S. Thorn	Yes				
U.S.S. Nicholas	Yes				
U.S.S. Shreveport	Yes				
U.S.S. Ponce	Yes				
U.S.S. Whidbey Island	Yes				
U.S.S. Grasp	Yes				
U.S.S. Ashland <sup>a</sup>	Yes				
U.S.S. Halyburton		Yes			
U.S.S. Oak Hill		Yes			
U.S.S. Carter Hill		Yes			
U.S.S. Arctic		Yes			
U.S.S. Vella Gulf		Yes			
U.S.S. Barry		Yes			
U.S.S. Stout		Yes			
U.S.S. Lamoure City <sup>b</sup>			Yes		
U.S.S. Roberts				Yes	
U.S.S. Radford				Yes	
U.S.S. Guam				Yes	
U.S.S. Anzio <sup>c</sup>					Yes
U.S.S. Cape St George <sup>c</sup>					Yes
U.S.S. Nicholson					Yes
U.S.S. Elrod					Yes
<b>Total count</b>	<b>7</b>	<b>7</b>	<b>1</b>	<b>3</b>	<b>4</b>

Note: In addition to the Norfolk area, other geographic regions experience descoped, deferred, and canceled CNO maintenance projects.

<sup>a</sup>Newport News won the maintenance contract for the U.S.S. Ashland.

<sup>b</sup>Rescheduled for fiscal year 1999.

<sup>c</sup>Maintenance projects for these ships were descoped before the Atlantic Fleet sent them to Norfolk Naval Shipyard.

Source: Our analysis of the Navy's Private Sector Depot Level Planning Report for Fiscal Year 1997 and 1998, NAVSEA Notice 4710 (Sept. 23, 1996) and execution data provided by CNO, NAVSEA, and the Atlantic Fleet.

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Navy Ship Maintenance: Temporary Duty Assignments of Temporarily Excess Shipyard Personnel Are Reasonable ([GAO/NSIAD-98-93](#), Apr. 21, 1998).

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Navy Regional Maintenance: Substantial Opportunities Exist to Build on Infrastructure Streamlining Progress ([GAO/NSIAD-98-4](#), Nov. 13, 1997).

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