BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Secretary Of Defense

The Navy Needs To Strengthen Facilities Construction And Maintenance Contracting Practices And Management Controls

The Naval Facilities Engineering Command is responsible for the design, construction, and maintenance of Navy shore facilities worldwide.

In reviewing 33 construction and 28 maintenance contracts awarded between fiscal years 1972 and 1982 at 26 contracting activities, GAO found a broad range of costly contract formation and administration problems. GAO's past work and other audit agencies' work indicate these problems are part of a long-standing pattern.

DOD concurs in GAO's recommendation intended to minimize the future recurrence of these problems and to better insure that the command's contracting authority is properly exercised and implemented.

GAO/NSIAD-85-16
JANUARY 30, 1985

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

NATIONAL SECURITY AND
INTERNATIONAL AFFAIRS DIVISION

B-216923

The Honorable Caspar W. Weinberger
The Secretary of Defense

Dear Mr. Secretary:

This report discusses our evaluation of Navy facilities construction and maintenance contracting practices and management controls.

The report contains a recommendation to the Secretary of the Navy and we are sending a copy of this report to him today so that he can comply with 31 U.S.C. 720, which 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 also sending copies of this report to the Chairmen, House Committee on Government Operations, Senate Committee on Governmental Affairs, House and Senate Committees on Appropriations and Armed Services; the Director, Office of Management and Budget; the Chief of Naval Material; the Commander, Naval Facilities Engineering Command; and other interested parties.

Sincerely yours,

Frank C. Conahan

Frank C. Conahan
Director

GENERAL ACCOUNTING OFFICE
REPORT TO THE SECRETARY
OF DEFENSE

THE NAVY NEEDS TO STRENGTHEN FACILITIES CONSTRUCTION AND MAINTENANCE CONTRACTING PRACTICES AND MANAGEMENT CONTROLS

D I G E S T

The Naval Facilities Engineering Command (NAVFAC), which is subordinate to the Naval Material Command, is responsible for providing the design, construction, and maintenance services for shore facilities needed by the Navy's operating commands.

In 1980, GAO reported to the Congress on problems in administering maintenance contracts at Army, Navy, and Air Force installations. The Department of Defense (DOD) generally concurred with GAO's findings and recommendations, but questioned the work involving NAVFAC. That work involved only one of the command's six Engineering Field Divisions (EFDs). (See p. 1.)

In this review, GAO wanted to find out if the same or similar types of problems might be occurring elsewhere on a variety of contracts. Therefore, GAO expanded its scope of work to include 61 contracts awarded between fiscal years 1972 and 1982 by 26 contracting activities located in five of the command's six divisions. GAO selected contracts that reflected significant opportunities for improvement. Because the selection of contracts was judgmental rather than random, GAO is not projecting its findings to all of the command's contracts. (See pp. 3 and 5.)

CONTRACT FORMATION

While reviewing contract administration matters, GAO found a need for improvements earlier in the procurement cycle when procurements are being planned and contracts are being formed. The following are some of the many examples indicating a need for management improvements in the contract formation process:

Tear Sheet

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--Planning the use of funds.

A $529,000 contract for roof replacement was awarded without taking the time to use an improved design. The likely reason--year-end spending. The result--a leaky roof with a probable shortened life and water-damaged hospital equipment and furnishings. (See p. 7.)

--Determining needs.

A shipyard contract for guard services overstated the number of security personnel needed. GAO alerted the shipyard to this condition and a change was initiated that should result in savings of about $140,000. (See p. 8.)

--Review of plans and specifications.

A specification error was made and rust prone iron, instead of stainless steel, pipe was used in a training facility's hydraulic system that would be connected to operational fighter aircraft. (See p. 9.)

--Preaward contract reviews.

GAO observed situations involving improper evaluation of unrealistic bids (see p. 11) and the use of a prohibited type of contract provision (see p. 12).

CONTRACT ADMINISTRATION

Contract administration entails all those actions that take place after contract award to enforce the contract terms and conditions. Effective contract administration should assure timely and satisfactory performance at the agreed price. The following are some of the many examples indicating a need for management improvements in the contract administration process:

--Contract enforcement and project acceptance.

A new roof has leaked since it was installed in 1976, yet the poor workmanship was accepted. A contract was awarded in 1982 to replace the roof for about $1 million. (See p. 13.)

--Pricing adjustments.

An audit recommendation to recover defective pricing of about $500,000 on a shipyard crane overhaul had not been resolved at the conclusion of GAO's review. It was resolved on January 16, 1984, through the issuance of a unilateral change order, which deducted about $452,000 from the contract price. (See p. 14.)

--Inspection of contractor performance.

Prior inspections had not detected poor contractor performance in the maintenance of fire hydrants and water distribution systems. The contractor billed and was paid as if the requirements had been met. (See p. 14.)

--Documentation of actions.

A new $10 million propellant disposal facility has never worked because of its new and untested design. As work proceeded and problems were encountered, over 200 verbal (rather than required written) change orders were issued in an attempt to salvage the facility. Without adequate documentation, the Navy could not properly administer the contract or evaluate, as part of the cost of the facility, a contractor claim for $1.6 million before it was paid. (See p. 17.)

--Payments to contractors.

In the month examined, a family housing maintenance contractor submitted and was paid, under a $590,000 contract, for many bills that should have been voided because they were based on duplicate work authorizations and/or rework. (See p. 17.)

FACTORS INFLUENCING MANAGEMENT CONTROLS

GAO found several factors that contributed to the poor procurement practices. One relates to limited organizational oversight. The command's inspector general reports have limited oversight value because they do not emphasize contracting matters. Also, examinations by the command's Contracts Procedures Review Boards are

infrequent and cursory. The problems GAO, as well as Navy auditors, found tended to be repeated rather than corrected because NAVFAC did not (1) determine whether prior audit findings were isolated examples or symptomatic of a commandwide condition and (2) make more than a minimal effort to communicate the problems to other units. (See pp. 19 to 21.)

GAO also recognizes year-end spending and the recent increasing volume of maintenance contracts as factors influencing poor procurement practices. (See p. 22.)

CONCLUSIONS

GAO concludes that the problems it found, coupled with those disclosed in other audit agencies' reports, demonstrate (1) a widespread pattern of contract formation and administration problems that cannot be considered as isolated to a few activities or contracts and (2) a need for management to bring about improvements. The command does not have an effective means of knowing if its decentralized and autonomous subordinates are operating efficiently and economically. Without commandwide improvements, resources cannot be adequately safeguarded against waste, loss, and misuse, and the problems may be repeated. (See p. 25.)

RECOMMENDATION

To minimize the recurrence of the problems it found, GAO recommends that the Secretary of the Navy direct the Chief of the Naval Material Command and the Commander of the Naval Facilities Engineering Command to improve their management oversight and internal controls over activities having NAVFAC contracting authority by

--increasing the effectiveness of Contract Procedures Review Board teams,

--systematically assessing all reported problems and determining whether these problems are isolated or NAVFAC-wide, and

--communicating the results of these assessments throughout NAVFAC. (See p. 26.)

AGENCY COMMENTS AND GAO'S EVALUATION

DOD stated that it basically concurred with GAO's report and its findings and recommendation. It also stated that progress was being made because substantial effort and resources have been devoted to this area since GAO's fieldwork. (See pp. 27 and 62.)

Of the 61 contracts GAO reviewed, DOD only took exception to the evaluation of 1, which GAO viewed as an example of year-end spending. The question at issue was whether the award of a contract to replace a roof should have been delayed so that an existing, improved design could have been used. DOD stated that the design used was based on valid criteria and that the decision to use it would have been the same, regardless of when the contract was awarded. GAO continues to believe that year-end spending was a significant factor in the roof decision because, among other reasons, according to Navy officials, the improved design was not used because it would have required a change in the proposed specifications for the contract, which would have delayed the date of the award past the end of the fiscal year. (See pp. 8 and 65 to 66.)

In addition, DOD disagreed with GAO's conclusion that NAVFAC does not know how widespread its contracting problems might be because of management control weaknesses, particularly those over its EFDs. DOD stated that NAVFAC has adequate procedures in place to evaluate the overall operational efficiency of its EFDs. It noted a wide range of automated management reports that provide information to the EFDs and Headquarters at the program, project, and contract levels, which it felt was sufficient to manage and direct acquisition programs, recognize adverse cost and performance trends, and initiate corrective action as needed. GAO reviewed the reports referred to by DOD during the audit and found that they did not disclose the scope, pervasiveness, and repetitiveness of problems experienced at the EFD and local levels. Thus, they did not provide NAVFAC with information needed to analyze an EFD's problems or to determine whether the problems were common to other EFDs and their local installations. (See pp. 21 and 63 to 64.)

Contents

ABBREVIATIONS

DOD	Department of Defense
EFDs	Engineering Field Divisions
GAO	General Accounting Office
NAVFAC	Naval Facilities Engineering Command
PWDs	Public Works Departments

CHAPTER 1

INTRODUCTION

On January 9, 1980, we issued a report to the Congress entitled Better Management Needed in DOD to Prevent Fraudulent and Erroneous Contract Payments and to Reduce Real Property Maintenance Costs (PSAD-80-14). Contract administration at the four Army, two Navy, and four Air Force installations visited was not adequate to prevent intentional or unintentional overcharges. Several installations paid for much more work than was done; some ordered unnecessary work and accepted inferior work; and some did not obtain lower prices because requirements were inappropriate or poorly written and price proposals were not properly analyzed.

On March 17, 1980, the Department of Defense (DOD) generally concurred with our findings and recommendations. It acknowledged a need to strengthen controls over the procurement of maintenance and repair services and advised the military services to restress procedures to preclude future problems. However, DOD questioned the sufficiency of our scope and the propriety of our methodology in the Naval Facilities Engineering Command (NAVFAC) portion of our report. Our prior work involved only two contracting offices of the Atlantic Engineering Field Division of NAVFAC.

Because significant expenditures were involved, we decided to do additional work at that division and to expand our work to other NAVFAC locations to determine whether the same or similar types of contract administration problems might be occurring on a variety of contracts.

NAVFAC

NAVFAC is one of five subordinate commands under the Naval Material Command. NAVFAC is generally responsible for the design, construction, and maintenance of worldwide Navy shore facilities. Its authority and responsibility are contained in a Naval Material Command Organizational Manual, which provides that NAVFAC:

> "...shall provide administrative and technical support and guidance to the Department of the Navy, other military departments, and other agencies, in accordance with their assigned functional and material support responsibilities. This support and guidance shall include: the establishment of standards and procedures; professional and technical advice, guidance, and assistance; performance of specialized administrative or technical functions or services; and review and evaluation of the implementation of such guidance, as appropriate..."

In fiscal year 1982, NAVFAC awarded 1,825 architect-engineering contracts for $85.6 million, 9,148 construction contracts for $1.8 billion, and 3,004 maintenance contracts for $150.9 million. The total value of construction contracts administered in fiscal 1982 was $6.1 billion. During this same period, NAVFAC had a total of 19,746 people. According to an official in NAVFAC's Resource Management Branch, about 3,943 NAVFAC personnel were performing acquisition functions.

The range of facilities NAVFAC designs and builds or contracts to design and build for its customers is extensive. Contracts have been awarded for the design, construction, and equipping of entire naval installations, costing hundreds of millions of dollars, such as the forward logistics support base on the island of Diego Garcia in the Indian Ocean and the Trident submarine stations in Washington and Georgia.

The design and construction of a project start with a determination of need. Each NAVFAC customer determines that a specific project is needed and describes it to NAVFAC. NAVFAC may either accomplish the design in-house or, if the project exceeds NAVFAC's design resources or capabilities, award an architect-engineering contract. Once NAVFAC approves the design, it begins the procurement process that results in the award of a construction contract. Contract administration, which includes those functions (receiving, inspection, payment, etc.) occurring after contract award that assure that contract terms and conditions are enforced, also rests with NAVFAC. Although it contracts for some services, such as architect-engineering, NAVFAC still retains full responsibility for successful project completion.

Upon completion of construction, maintenance is provided by the installations. NAVFAC's involvement with maintenance is not as extensive as it is with construction projects; however, it retains contracting responsibility. Organizational relationships and functions are described briefly below.

Engineering Field Divisions

NAVFAC provides its services primarily through its six Engineering Field Divisions (EFDs). EFDs are responsible for overseeing the contracting activities of their subunits and providing technical guidance and service to them. EFDs also are responsible for guiding and monitoring the contracting activities of Public Works Departments (PWDs), non-NAVFAC units, which are discussed below.

Construction offices

These NAVFAC subunits, which the Navy calls officers in charge of construction or resident officers in charge of construction, are primarily responsible to their respective EFDs for design activities, contracting, and day-to-day contract administration of construction projects.

Public works centers

These NAVFAC subunits are located at the larger naval installations and are responsible to their respective EFDs for a variety of activities performed for the installations. Their construction activities include limited design services, contracting, and the administration of some medium-sized projects. Also, they award and administer maintenance contracts. In fiscal year 1982, there were nine centers throughout the Navy.

Public works departments

Although these components are not part of NAVFAC, they are an integral part of the naval installations on which they are located. NAVFAC, through its EFDs, has delegated contracting authority to PWDs for obtaining maintenance services and limited construction work. The officer in charge of each PWD answers to the installation commander for the overall operations of the PWD, and to the respective EFD for the proper administration of the assigned contracting authority. In fiscal year 1982, there were about 130 PWDs throughout the Navy.

Figure 1 on page 4 shows the organizational relationships of all these and other Navy components.

OBJECTIVE, SCOPE, AND METHODOLOGY

Our basic objective was to evaluate NAVFAC's administration of construction and maintenance contracts to see if significant improvements could be made. We did not assess NAVFAC's overall management.

During the period July 1982 through June 1983, we reviewed NAVFAC's oversight of its contracting offices and appropriate audit and inspector general reports. We performed our work at NAVFAC headquarters, five of the six EFDs, and 26 contracting activities at the following installations:

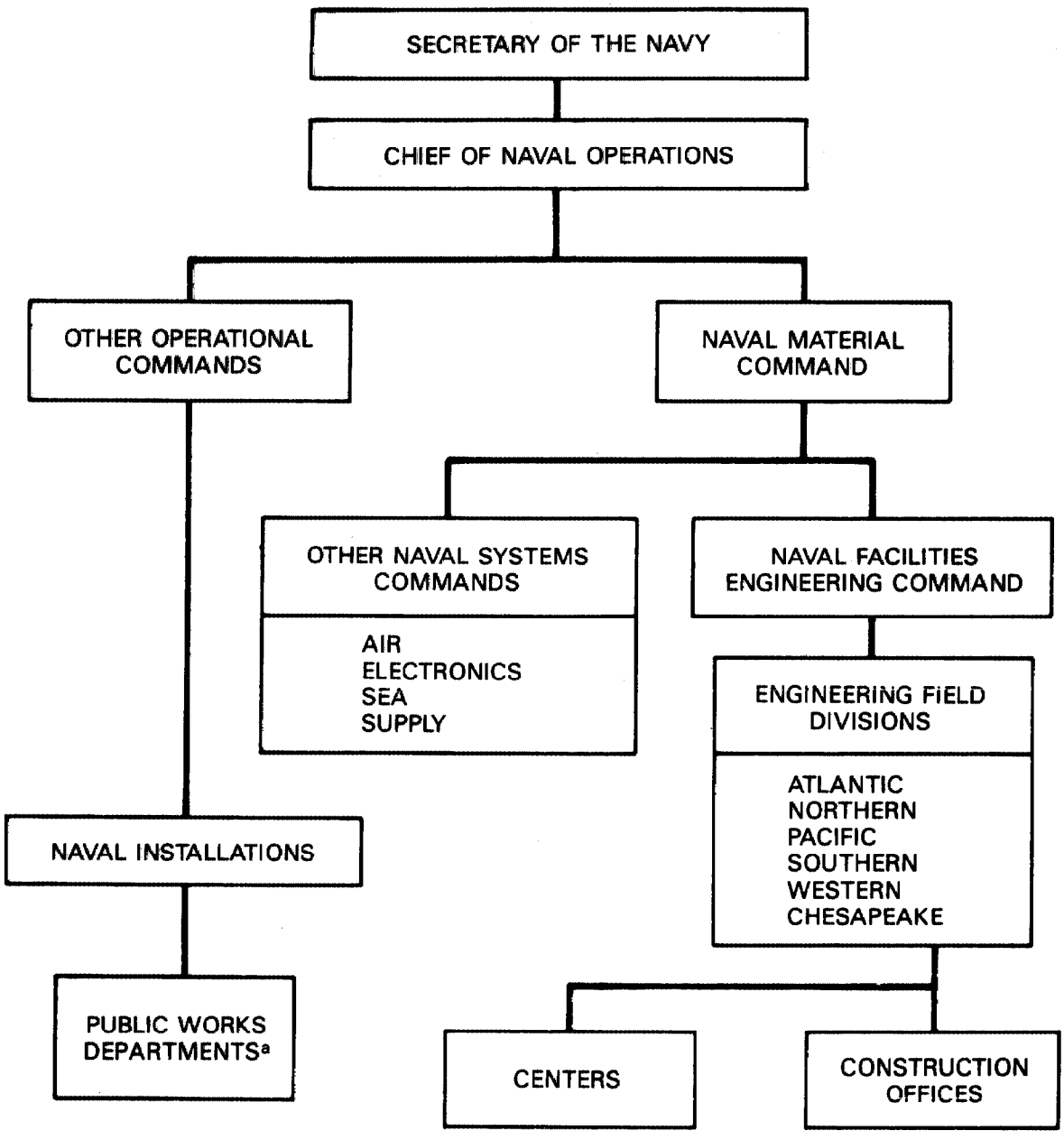
Atlantic EFD, Norfolk, Va.

Naval Air Station, Oceana, Virginia Beach, Va.
Naval Amphibious Base, Little Creek, Norfolk, Va.
Norfolk Naval Shipyard, Portsmouth, Va.
U.S. Naval Base, Guantanamo Bay, Cuba

Chesapeake EFD, Washington, DC

Naval Ordnance Station, Indian Head, Md.
National Naval Medical Center, Bethesda, Md.

ORGANIZATIONAL RELATIONSHIPS OF NAVAL FACILITIES ENGINEERING COMMAND AND OTHER NAVY COMPONENTS



[a] Engineering Field Divisions provide guidance and advice to Public Works Departments, which answer to Engineering Field Divisions via the assigned contract authority.

Figure 1

Northern EFD, Philadelphia, Pa.

Naval Air Development Center, Warminster, Pa.
Philadelphia Naval Shipyard, Philadelphia, Pa.
Philadelphia Naval Base, Philadelphia, Pa.

Southern EFD, Charleston, S.C.

Naval Air Station, Pensacola, Fla.
Naval Air Station, Jacksonville, Fla.
Naval Air Station, Whiting Field, Milton, Fla.

Western EFD, San Bruno, Calif.

Naval Submarine Base, Bangor, Bremerton, Wash.
Naval Undersea Warfare Engineering Station, Keyport, Wash.
Naval Air Station, Whidbey Island, Oak Harbor, Wash.
Long Beach Naval Shipyard, Long Beach, Calif.
Long Beach Naval Station, Long Beach, Calif.

Because of the large number of contracting activities, the multitude and variety of contracts administered at each site, and the time needed to evaluate a single contract, we considered it impracticable to select a statistically valid sample of NAVFAC contracts. We reviewed 33 construction and 28 maintenance contracts. Of these 61 contracts, 55 were awarded in fiscal years 1979 through 1982 and 6 were awarded in fiscal years 1972 through 1978. These latter contracts were selected because they were open and were being administered at the time of our review.

In approaching our work, we began at the Headquarters and division levels by looking at the systems in place for review and control of contracting offices. We then moved to the contracting activity level to review local practices and procedures. To identify needed improvements, we held discussions with contract administrators and onsite inspectors. These are the people whose daily work determines whether the Navy gets full value for its contract dollar and who see first hand the effects of acquisition and contract performance problems. On the basis of these discussions, as well as our review of contract files, we selected contracts for detailed review that, in our judgment, reflected significant opportunities for improvement.

Because we did not use a statistically valid sample of contracts, we cannot make a NAVFAC-wide projection of potential cost savings or say that our observations apply to all NAVFAC contracts. Our review was performed in accordance with generally accepted government audit standards.

As we finished work at the various field audit sites, we presented written statements of fact to the responsible officials. Their comments were considered in preparing this report.

Although our work began with reviewing contract administration functions that are performed after contract award, we found that many improvements can be made earlier in the procurement cycle when procurements are being planned and contracts are being formed. We have organized the presentation of our findings into those that relate to contract formation in chapter 2, contract administration in chapter 3, and other factors in chapter 4.

CHAPTER 2

NAVFAC NEEDS TO STRENGTHEN CONTRACT FORMATION PRACTICES

The process of contract formation starts with a determination of needs and continues until a contract is awarded. It includes estimation of costs, determination of funds availability, design, solicitation and evaluation of bids or negotiation of proposals, and source selection. NAVFAC is involved throughout this process.

NAVFAC, as demonstrated by the examples discussed in this chapter, could achieve significant savings by improving the following areas of contract formation:

--Planning the use of funds.

--Determination of needs.

--Review of plans and specifications.

--Preaward review of bids and contract provisions.

The Naval Material Command requires NAVFAC to determine if the Navy's construction funds are used effectively. NAVFAC is responsible for assuring that plans and specifications are clear and that contracts are properly reviewed before award. Further, Navy regulations prohibit acceptance of unbalanced bids and use of cost-plus-a-percentage-of-cost type contracting, which are not in the best interests of the government. The problems in these areas are discussed in the following sections.

BETTER PLANNING FOR THE USE OF FUNDS COULD SAVE MONEY

The Naval Material Command requires NAVFAC to implement and assure an effective construction and maintenance program that meets the Navy's needs. However, decisions based primarily on the desire to avoid the loss of available funding can result in defective facilities and unsatisfactory work, as the following instance shows.

The Chesapeake EFD awarded a $529,000 contract to replace a hospital roof for its customer, the National Naval Medical Center, Bethesda, Maryland, despite its consultant's and an EFD official's recommendation that the award be delayed so that an existing, improved design could be used. Because this would have delayed award to the next fiscal year, resulting in the loss of funds that could only be used in fiscal year 1981, the medical center declined and the EFD awarded the contract on September 30, 1981, the last day of the fiscal year. The work, which was required to be started soon after that date, was

performed in the winter. Poor contractor performance, aggravated by the cold weather, resulted in a defective, leaky roof; damaged hospital equipment and furnishings; and an increased probability of a shortened roof life. If the improved, less expensive design had been used and properly installed, waste and damage could have been avoided. (See app. II for additional details.)

Agency comments

In its comments on a draft of this report, DOD stated that the selection of the roof design and the construction problems were not related to hasty year-end spending. DOD noted that the design of the roofs was based on valid criteria to rapidly dispose of water and that the roof system chosen was one recommended by a recognized authority on roofing and water proofing for use in similar applications. Therefore, DOD stated that the decision to use this roof system would have been the same, regardless of when the contract was awarded.

GAO evaluation of agency comments

According to Chesapeake EFD and medical center officials, the improved design was not used because it would have required a change in the proposed specifications for the contract, which would have delayed the date of the award past the end of the fiscal year. As to the merits of the improved design, we found at the time of our fieldwork that a renovation contractor had proposed its use and that on September 14, 1981, the Chesapeake EFD was favorably considering the improved design as cost beneficial. After the award of this contract, the improved design was, in fact, used on other roofs on that structure. For these reasons, we continue to believe that year-end spending was a significant factor in the roof decision.

PROPER EVALUATION OF NEEDS COULD REDUCE COSTS

NAVFAC is responsible for the accuracy of construction project specifications. NAVFAC is also responsible for providing guidance to and reviewing PWDs' specifications and the proposed contracts for maintenance work.

Some customers' stated needs were not properly evaluated by NAVFAC before they were placed on contract. The result was that contracts were awarded for items reflecting a work requirement, portions of which were not needed, and, as shown in appendix IV, for a facility which, as designed, was not feasible to build and operate.

In one example, a $2.5 million contract for guard services at the Norfolk Naval Shipyard, Portsmouth, Virginia, overstated the number of security personnel needed. Navy officials in the

shipyard's contracts section concurred with us that security personnel needs were overstated. Later, the Atlantic EFD advised us that the shipyard was processing a change to reduce the number of security personnel, which would save about $140,000.

In another example, a contract for $1,173,000 for janitorial services at the Naval Ordnance Station, Indian Head, Maryland, was awarded by the station's PWD. Specifications prepared by the PWD showed the area to be cleaned as 585,742 square feet, an overstatement, according to our calculations, of 38,000 square feet. The Chesapeake EFD's review did not detect the inaccuracy. However, the contractor billed the Navy for cleaning the specified area, and, at the time of our audit, the contractor had been overpaid by as much as $53,000.

THOROUGH REVIEW OF PLANS AND SPECIFICATIONS COULD PREVENT ADDITIONAL COSTS, DELAY, AND DEGRADED FACILITIES

NAVFAC or PWDs should assure that contract plans and specifications are accurate, whether they are prepared by NAVFAC or by an architect-engineering firm. We found problems in plans and specifications, as discussed in the following examples, at EFDs visited.

In one example, the Atlantic EFD's inadequate review and coordination of plans and specifications for a hydraulic system in the squadron training building at the Naval Air Station, Oceana, Virginia Beach, Virginia, resulted in an unusable system. The EFD erroneously specified black iron pipe, which rusts, for the hydraulic system that would be connected to operational fighter aircraft. The oversight was not detected until the user found that it could not operate the system without contaminating an aircraft's hydraulic system with rust. As a result, delays were incurred while the pipe was replaced with stainless steel pipe, at an additional cost of about $83,000.

In another example, an initial contract price of about $3.2 million for installation of a fire protection pipeline at the Long Beach Naval Shipyard, Long Beach, California, increased and delays occurred because of inaccurate drawings. These drawings, submitted to the construction office at the shipyard by an architect-engineering contractor, did not reflect an underground obstruction. Construction office personnel told us that the drawings submitted had not been properly reviewed. As a result, the omission was not detected, even though it was noted on drawings available at the shipyard. When the contractor started work, the obstruction became evident. A photograph of the underground obstruction in the path of new excavation is shown on page 10. According to the construction officer, it would cost about $200,000 to remove the obstruction.

Underground obstruction, in the path of new excavation, which was not reflected in architect-engineer drawings. Long Beach Naval Shipyard, Long Beach, California. (U.S. Navy photo.)

In another example, the Navy constructed an aircraft painting facility at the Naval Air Station, Pensacola, Florida, although serious design and construction problems had not been solved at a similar facility at the Naval Air Rework Facility, Naval Air Station, Jacksonville, Florida. Consequently, both plants were experiencing severe humidity problems that reduced the Navy's ability to paint aircraft and resulted in additional costs. (See app. III for additional details on the Jacksonville facility.)

BETTER PREAWARD REVIEW OF BIDS AND CONTRACT PROVISIONS COULD SAVE MONEY

We found two significant areas where NAVFAC could save money by adhering to procurement regulations. These areas concern the use of: accurate work statements, coupled with a proper review of bids to prevent the acceptance of unbalanced bids, and appropriate contract terms to prevent overpricing.

Unbalanced bidding

Solicitations for requirements contracts usually contain several line items identifying the various types of work to be done and the government's estimated quantity requirement for each type. During bid evaluation, each bidder's unit prices are multiplied by the quantity estimates, and a contract is awarded to the contractor bidding the lowest total price for all line items. Therefore, the successful bidder may not be the lowest bidder for every line item.

For the above reason, multiple-line item requirements contracts are susceptible to a competitive strategy known as unbalanced bidding. If, for example, a bidder suspects or knows the government's quantity estimates are inaccurate, it may bid low on items it believes are overstated and high on items it believes are understated.

If the bidder's beliefs are correct, it will, after receiving the contract, be required to perform little or no work at the lower prices and more work than anticipated at the higher prices. This can result in the contractor being paid more than unsuccessful bidders for the same work.

A contractor, for example, that received an award for interior painting at the Naval Air Station, Pensacola, for several years, had information that the estimated quantities per bid item were at variance to work normally performed. For 2 years, the contractor bid low on items where little or no work had actually been performed, although the estimated quantities were high, and high on understated bid items. Specifically, on the most recent contract, the contractor bid $1.00 a square (100 square feet) for an overstated line item requiring two coats of paint and $6.50 a square for an understated item requiring only one coat; consequently, it was the low bidder. Had the center

at the station updated the historical work quantities, as required, the opportunity for unbalanced bidding would have been avoided. Further, had the contracting officer properly reviewed the bids, the unbalancing would have been detected and appropriate action taken. The difference between the unbalanced bid and the next low bid was about $13,600. (See app. VI for additional details.)

Prohibited contracting

Contracting that provides for reimbursement to the contractor for actual cost plus some fixed percentage of such cost (cost-plus-a-percentage-of-cost) is barred by the Armed Services Procurement Act (10 U.S.C. 2306) because it encourages wasteful and costly performance, since profit increases in proportion to the cost of performance.

At the Philadelphia Naval Base, Philadelphia, Pennsylvania, at least 12 construction and maintenance contracts of varying amounts were awarded with a cost-plus-a-percentage-of-cost provision for material. Local PWD officials believed the provision was not prohibited but beneficial to the Navy. The Assistant Commander for Contracts at NAVFAC Headquarters, however, agreed with us that this provision was prohibited. (See app. VIII for additional details.)

The construction office, U.S. Naval Base, Guantanamo Bay, Cuba, awarded at least two contracts with cost-plus-a-percentage-of-cost provisions. One of these contracts provided for reimbursing a contractor for the cost of materials, plus 47.5 percent.

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The problems discussed in this chapter are summarized in appendix IX and contribute in part to our overall conclusions and recommendation stated in chapter 5. While problems discussed in this chapter relate directly to the formation and award of contracts, they also can affect NAVFAC's ability to properly administer contracts after award. Contract administration problems are discussed in the next chapter.

CHAPTER 3

NAVFAC NEEDS TO IMPROVE CONTRACT ADMINISTRATION PRACTICES

Contract administration includes those functions that occur after contract award to assure that the terms and conditions of a contract are enforced. Three primary interrelated functions are: (1) inspection of contractor performance, (2) enforcement of contract terms, and (3) review and approval of requests for payment. During this phase, the administrator must clearly document the significant actions the contractor and the Navy have taken.

Our work indicated that improvements are needed in the following contract administration areas:

--Contract enforcement and project acceptance.

--Pricing adjustments.

--Inspection of contractor performance.

--Documentation of actions.

--Payments to contractors.

NAVFAC is responsible for assuring that contractors perform satisfactorily and that bills submitted are accurate before they are paid. We found some examples of performance problems and questionable bill payments that were caused by inadequate inspections and contract documentation.

ENFORCEMENT OF CONTRACT TERMS AND PROPER ACCEPTANCE COULD SAVE MONEY

While inspectors deal with contractors daily, others, such as engineers, should assure that the project is continuing as planned. The construction office should decide on changes to plans and specifications, correction of reported deficiencies, and final acceptance. The construction office also should take timely action on reported problems to protect the government's interests. We noted instances where contract terms should have been enforced, as described in the following two examples.

In the first example, the roof of the Trident training facility at the Naval Submarine Base, Bangor, Bremerton, Washington, has leaked since it was installed in 1976. The Navy accepted the work, although the construction office was aware of problems 6 to 10 months before completion. Later, two separate studies established that the contractor had performed improperly. After spending $55,000 for emergency repairs, the Navy awarded a contract in 1982 to another contractor to replace the roof for about $1 million. (See app. I for additional details.)

In the second example, the construction office at the Naval Air Rework Facility, Jacksonville, accepted an aircraft painting facility as usably complete, although 24 deficiencies existed. The 1-year warranty started with acceptance. The construction office would not permit the rework facility to move in until 8 months after acceptance because the contractor was working. After the rework facility moved in, it found additional problems. It has funded corrective projects at a cost of $172,000 and it planned to spend an additional $500,000, even though it was not responsible for making corrections. Although many problems were attributed to the contractor, the warranty, which started with acceptance, was never exercised. (See app. III for additional details.)

RECOVERY OF OVERSTATED PRICES COULD BE MORE TIMELY

The Federal Acquisition Regulation (and the Defense Acquisition Regulation, which was in effect at the time of our audit) requires the Navy to obtain contractor cost or pricing data supporting proposed prices for negotiated contracts over $500,000 and a certification that the data are current, complete, and accurate at the time of agreement. If it is later determined that the contract price was overstated because the data did not meet these criteria, the contracting officer may request reimbursement due to defective pricing. The contracting officer generally relies on the Defense Contract Audit Agency to review the certified data.

The Atlantic EFD awarded a contract to overhaul four cranes at the Norfolk Naval Shipyard. At the conclusion of our field-work, the contract was still active and amounted to about $12,400,000. The audit agency reported apparent defective pricing of $531,887. We estimate that about $500,000 of this amount related to the contractor's use of high material quotes in its proposal, which was certified as being current, complete, and accurate. It bought material, however, at lower prices knowing, at the time of the agreement, that the lower prices were available. More than a year after the EFD received the audit report, and after we asked for an EFD position, it requested the audit agency to perform essentially the same audit again. At the conclusion of our review, the EFD had made no recovery.

Agency comments

In its comments on a draft of this report, DOD stated that a unilateral change order to the contract had been issued on January 16, 1984, deducting $451,949 from the contract price.

ADEQUATE INSPECTION IS NEEDED TO DETECT POOR PERFORMANCE

Inspection is the basis for determining if the government gets full value for its procurement dollar. Therefore, before

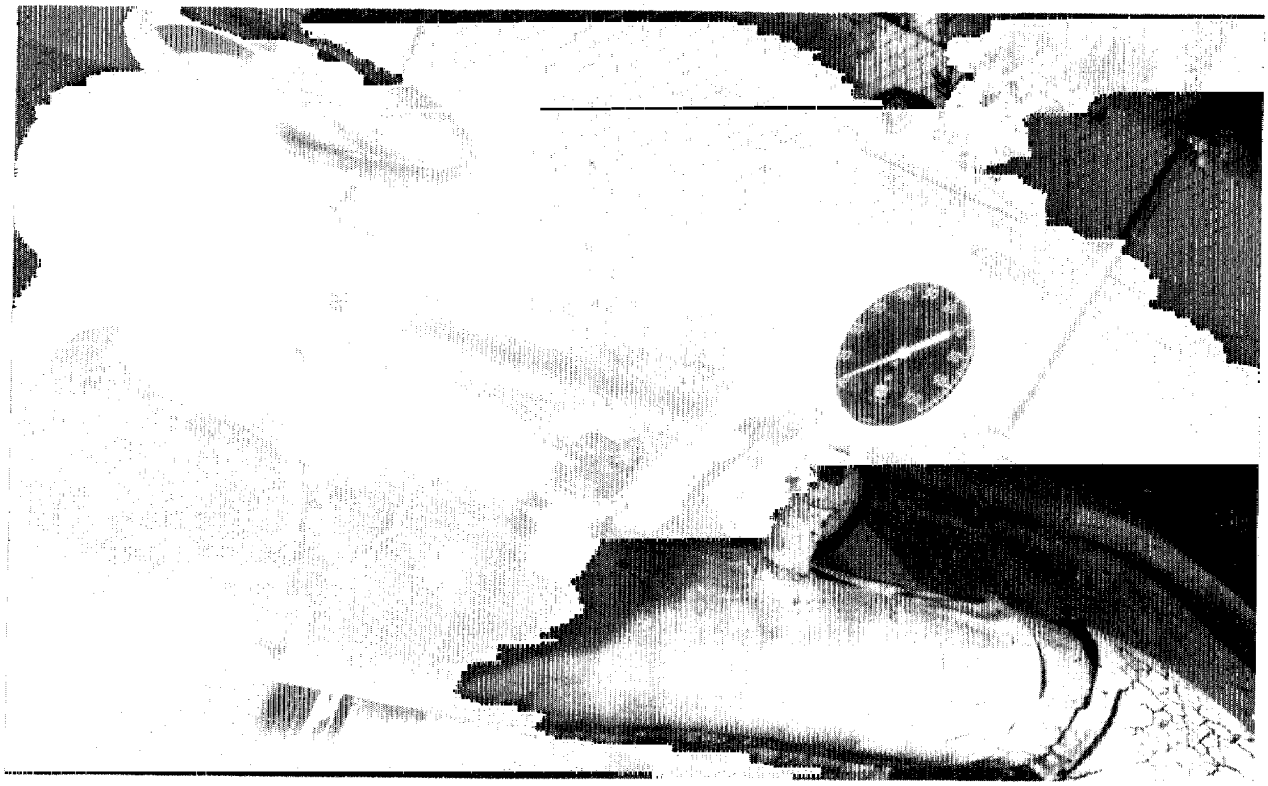
they certify work for payment, NAVFAC and PWD inspectors and contract administrators should assure that performance and quality match specification requirements. Also, inspectors should follow a sound inspection plan and clearly document their observations. However, we found instances where inspectors had approved defective work. They also did not (1) follow a plan, (2) adequately document their findings, (3) verify the work, and (4) make inspections in accordance with required schedules. As a result, inadequate work went undetected or unchallenged and excessive bills were paid. The following examples and others in appendix IX illustrate the point.

The Norfolk Naval Shipyard discovered that prior inspections had not detected poor contractor performance in the maintenance of fire hydrants and water distribution systems on a $668,000 contract. The shipyard noted the contractor had not complied with the specifications for about 18 months; however, the contractor billed and was paid as if they had been met. The shipyard did not plan to recover the overpayment because it had accepted the work without properly documenting the variance between performance and specifications.

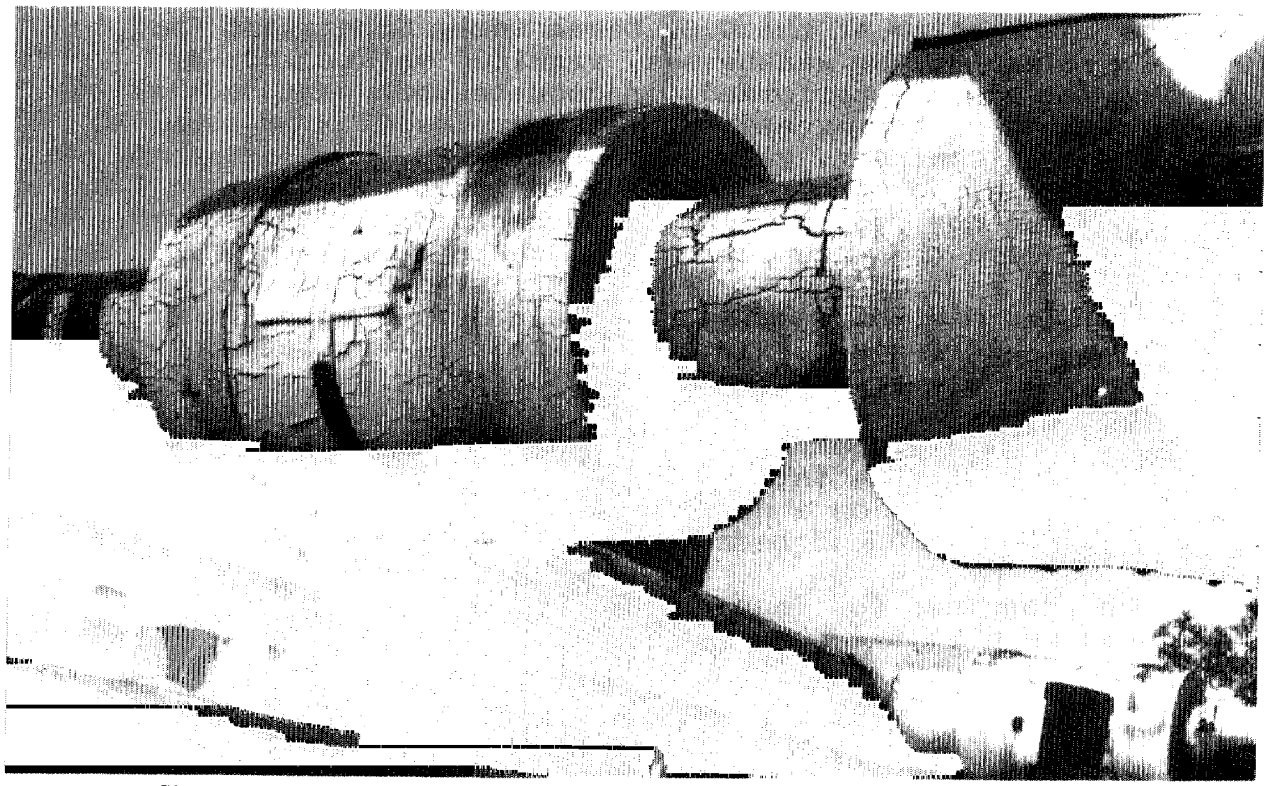
Inspection of the contractor's performance on a $139,000 family housing interior painting and plastering contract was lax at the Philadelphia Naval Base. As a result, the contractor was paid for defective work and an inferior grade of paint. (See app. V for additional details.)

We noted weaknesses in the inspection procedures for maintenance contracting at the U.S. Naval Base, Guantanamo Bay, Cuba. Because of the weaknesses, required maintenance and repair work was not performed, inadequate work went undetected or unchallenged, and excessive bills were paid. For example, the work on a contract, valued at about $683,000, for maintenance and repair of major air-conditioning and refrigeration equipment was not properly inspected because the inspector said he did not have the technical knowledge to do it properly. Our onsite check at 5 of the 12 locations listed in the September 7, 1982, billing disclosed air-conditioning units with inoperative gauges, oil and freon levels not maintained, insulation missing, and plants growing from cracked insulation. (Photographs on p. 16 show some of these problems.) After we brought these and similar matters to their attention, the Atlantic EFD and personnel at the base intensified their inspections and began to recover overcharges on a number of contracts. As of February 1983, about $36,000 had been recovered on five contracts.

The practices for inspection and certification for payment were weak on a $1,534,000 janitorial service contract at the Naval Air Development Center, Warminster, Pennsylvania. We found that (1) inspections were inconsistent, (2) inspection discrepancies were not recorded, (3) mathematical errors were not detected, and (4) discounts for prompt payment were lost on four invoices because they were paid late. (See app. VII for additional details.)



Air-conditioning piping with an inoperative gauge.



Plants growing out of cracked insulation. U.S. Naval Base, Guantanamo Bay, Cuba.

ADEQUATE DOCUMENTATION COULD HELP CONTROL COSTS

Navy contract administrators should document the occurrence of inadequate performance and changes in scope to assure that equitable adjustments are made and to defend the Navy against claims. However, we found instances where these matters were not adequately documented and where questionable or potentially unnecessary costs were paid.

For example, a new propellant disposal facility at the Naval Ordnance Station, Indian Head, built at a cost of more than $10 million, has never worked. The Chesapeake EFD approved the system, as designed by architect-engineering firms, even though the design was new and untested. As problems were encountered, the construction office at the station circumvented proper contract administration by issuing over 200 verbal change orders in an attempt to salvage the facility. Later, when the Navy terminated the project for the convenience of the government, the contractor submitted a termination claim, which was audited by the Defense Contract Audit Agency. Because the Navy did not have adequate documentation, it could not properly evaluate the contractor's claim. Consequently, it paid the contractor $1.6 million, virtually all the costs claimed. On June 30, 1982, the Navy accepted an inoperable facility that had no known future uses. (See app. IV for additional details.)

VERIFICATION OF PAYMENT REQUESTS COULD PREVENT OVERPAYMENTS

Before paying contractor bills, Navy personnel should verify that work performed is in accordance with contract terms. We found instances where contractors submitted bills for work in excess of that performed and for work inadequately performed. We also found that duplicate bills were paid.

At the Naval Air Station, Oceana, we examined billings of about $37,000 for the month of September 1982 on a contract, valued at about $590,000, for maintenance of family housing. We identified 28 instances of potential duplicate work authorizations and/or rework billed by the contractor that may have resulted in an estimated $711 overpayment. At our request, Navy officials reviewed these authorizations and found that many were duplicate and should have been voided in accordance with contract terms. Also, payment requests were not adequately verified to assure that required deductions were taken for unsatisfactory performance.

On another contract, valued at about $129,000, for maintenance of fixed fire protection and warning systems, also at this Naval Air Station, payment was made for work that could not be performed because some valves to be maintained had been mistakenly buried. Although the contractor noted that the valves were covered, it made no adjustments to its billings to

reflect the reduced effort. After we brought this to the Navy's attention, contracting officials said that action would be taken to adjust payments made. (See apps. V, VI, and IX for additional examples of payment irregularities.)

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The problems discussed in this chapter are summarized in appendix IX and contribute in part to our overall conclusions and recommendation stated in chapter 5.

CHAPTER 4

FACTORS CONTRIBUTING TO POOR PROCUREMENT PRACTICES

While any example of poor procurement management has its own specific underlying cause, it may also be indirectly influenced by one or more contributing factors. We identified three such factors contributing to poor NAVFAC procurement practices. These factors, discussed below, relate to organizational oversight, increased contracting for maintenance, and year-end spending.

LIMITED ORGANIZATIONAL OVERSIGHT

The Naval Material Command oversees its subordinate commands, including NAVFAC, through deputy chiefs, such as the Deputy Chief of Naval Material for Acquisition, who are responsible for functional areas. Thus organized, the command can cut across the organizational lines of its subordinates and monitor the effectiveness of basic mission-essential functions. The command provides basic policy and guidance to its subordinates; however, we found no evidence that it evaluates their composite managerial performance in terms of efficiency and economy. It appears to us that the command is primarily concerned with whether NAVFAC's customers are satisfied with NAVFAC's services and that it has no effective way of measuring whether those services are being delivered efficiently and economically.

The command may become aware of NAVFAC's operational problems through internal reports from its Inspector General. The latest available report, at the time of our visit, dated March 1981, generally provided limited insight into NAVFAC's contracting practices because it basically covered administrative matters.

NAVFAC's overview capabilities mirror those of the command. Just as the command does not appear to have an adequate mechanism for evaluating the operational efficiency and economy of NAVFAC, NAVFAC does not appear to have adequate procedures to evaluate its EFDs. Thus, the operational management of these subordinates is largely decentralized and autonomous.

According to NAVFAC's Inspector General, NAVFAC also relies on its Inspector General and external sources, such as the Naval Audit Service, for reports on the performance of its EFDs. However, the findings in these reports are usually dealt with on an ad hoc basis, without any organized effort to analyze a larger number of audit findings to determine whether problems are isolated or systemwide.

Our review of NAVFAC Inspector General reports showed that they dealt largely with administrative, not contractual, matters. The reports discussed such matters as the currency and completeness of files and adequacy of personnel practices. In discussing the usefulness of these reports with NAVFAC officials and the Inspector General, the NAVFAC Inspector General told us that the command relies on the professionalism of its staff to evaluate contractual matters.

EFDs, using small teams called Contracts Procedures Review Boards, review the activities of contracting offices. At each EFD visited, we examined the board reports and found that these reviews:

--Were scheduled for an 18-month cycle; however, some locations had not been visited for more than 5 years.

--Were primarily a cursory 2- to 3-day examination of contract procedures and contract file documentation.

--Did not result in timely follow-up to assure corrective action had been taken.

Board members did not, as a rule, evaluate contractor performance or examine and test the adequacy of vouchering and payment systems. Therefore, these examinations provided little assurance to EFDs that their contracting activities, where most of the money is spent, were exercising good stewardship. The board reports did not generally identify the same types of problems discussed in this report.

For years, NAVFAC's subordinates and PWDs have been the subject of external audit groups' reports. These reports, some of which are listed in appendix X, identified problems at individual locations. We found only a minimal effort to communicate the problems to other units. Further, NAVFAC did not determine whether the prior audit findings were isolated examples or were symptomatic of a commandwide condition. As a result, problems were repeated at the same and other units. Examples follow.

In fiscal year 1979, the Naval Audit Service reported that, under a Norfolk Naval Shipyard contract, the number of security personnel needed at a storage annex appeared to be excessive. The shipyard concurred. In April 1982, we informed Navy people in the shipyard's contracts section of an apparent overstatement in security personnel on this contract. They reviewed the staffing requirement and confirmed that the level was excessive. At the conclusion of our fieldwork in June 1983, the shipyard had not taken corrective action. Later, the Atlantic EFD told us that the shipyard's PWD was processing a change to reduce the number of security personnel, which would save about $140,000 through 1984.

In our January 1980 report, we discussed internal control and contract administration weaknesses that resulted in overpayments on three NAVFAC contracts. In this review, we followed up on that report and learned that Navy family housing personnel knowingly approved inaccurate voucher payments of one contractor. NAVFAC has confirmed that inappropriate contract payments were made and has identified about $161,000 in overpayments to the contractor. The same situation occurred at the Philadelphia Naval Base. (See app. V for additional details.)

In 1981 the Naval Audit Service reported on a review of five contracts, valued at $1.7 million, at the U.S. Naval Base, Guantanamo Bay, Cuba. It found the base had certified invoices for payment without proper verification, adequate contract performance, and complete documentation of contract performance or change order negotiation. In November 1982, we reviewed nine contracts valued at $14.7 million at this base. We found inadequate inspection on seven contracts, inadequate verification of invoices on six, and incomplete documentation of verbal change orders on one.

Agency comments

In its comments on a draft of this report, DOD disagreed with our conclusion that NAVFAC does not know the scope of or how widespread its contracting problems might be because of weaknesses in its management controls, particularly those over its EFDs. DOD stated that NAVFAC has adequate procedures in place to evaluate the overall operational efficiency of its EFDs. DOD noted there was a wide range of automated management reports that provide information to EFDs and Headquarters at the program, project, and contract levels, which it felt was sufficient to manage and direct the acquisition programs, recognize adverse cost and performance trends, and initiate corrective action as needed.

GAO evaluation of agency comments

We reviewed the management reports referred to by DOD during our audit and found that these reports did not disclose the scope, pervasiveness, and repetitiveness of problems experienced at the EFD and local levels. Thus, the reports did not provide NAVFAC with information needed to analyze an EFD's problems or to determine whether the problems were common to other EFDs and their local installations.

DOD agreed that local contract administration review by NAVFAC and its EFDs needs to be strengthened to provide more effective disclosure of local procedural weaknesses and stated that NAVFAC is taking action to strengthen this area within available resources.

INCREASED MAINTENANCE CONTRACTING AND YEAR-END SPENDING

There could be mitigating circumstances beyond NAVFAC's control that may have contributed to the problems we found. These involve the increased level of contracting out and year-end spending.

Maintenance contracts provide for services such as janitorial, grounds maintenance, and family housing maintenance. They are awarded and administered by centers and PWDs. Until about 5 years ago, much of the naval facilities' maintenance work was performed by employees of centers and PWDs. Because of increased emphasis on implementing Office of Management and Budget Circular A-76, which encourages contracting out, maintenance contracts experienced an extensive growth as shown by figure 2 on page 23. At this point, increased emphasis was needed by centers and PWDs to make sure not only that they were effectively (1) devising contract terms and contracting methods and (2) inspecting the work and vouchering contractors' invoices for payment, but that they were effectively organized to administer daily contractual matters. In short, centers and PWDs, which once generally performed the work, had to undergo a transformation to award and administer the maintenance contracts with a work force that needed to be effectively organized and trained in procurement and contract administration.

NAVFAC also finds itself caught up in year-end construction spending--fiscal year 1982 is shown by figure 3 on page 24--and its officials may make contract formation decisions contrary to sound judgment because of the potential loss of available funding. (One example was discussed on p. 7.) The construction spending pattern for fiscal year 1981 also showed a significant year-end increase.

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NAVFAC officials stated that the problems we found were typical of those they encountered. However, they said that the problems were isolated and were caused by their need for more money, training, and personnel. We comment on this statement by the NAVFAC officials in chapter 5, which contains our overall conclusions and recommendation.

VALUE OF MAINTENANCE CONTRACT AWARDS

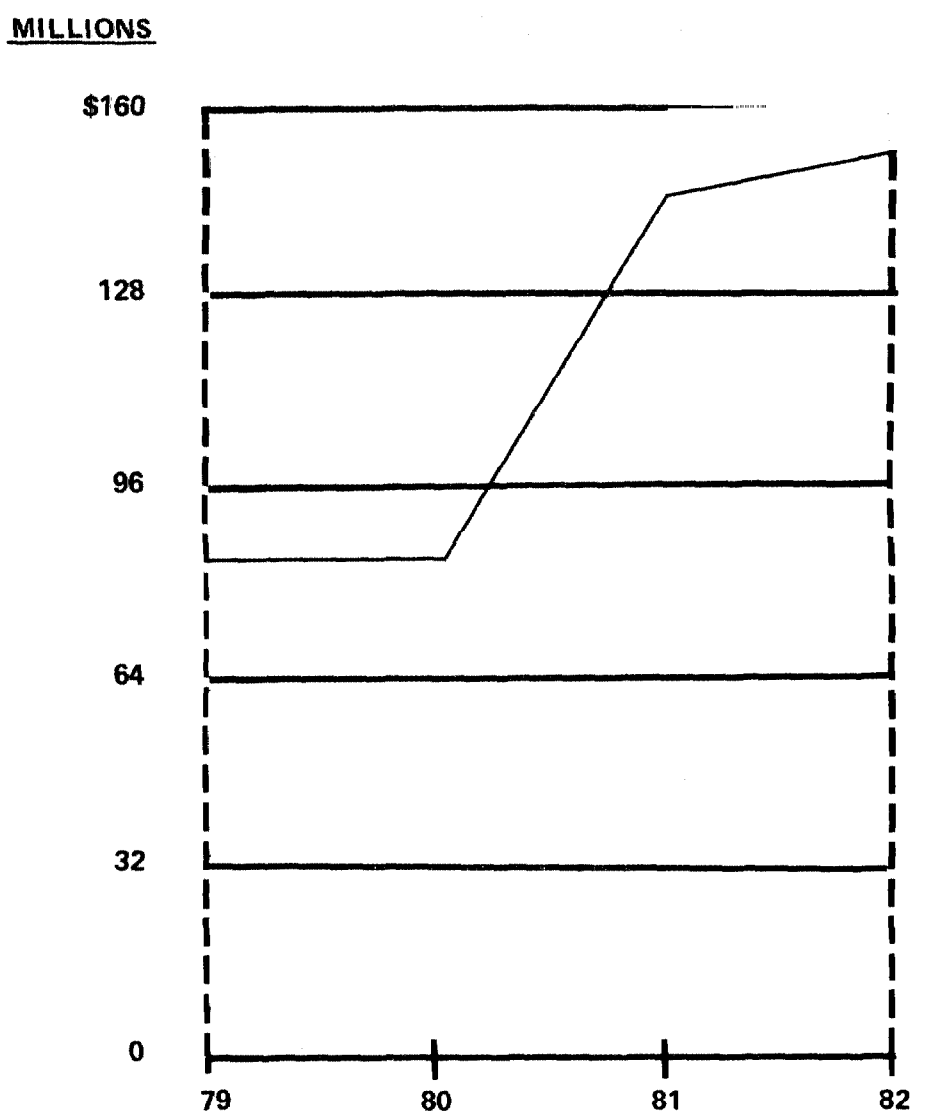


Figure 2

NUMBER OF MONTHLY CONSTRUCTION CONTRACT AWARDS BY EFDs AS A PERCENT OF TOTAL FOR FISCAL YEAR 1982

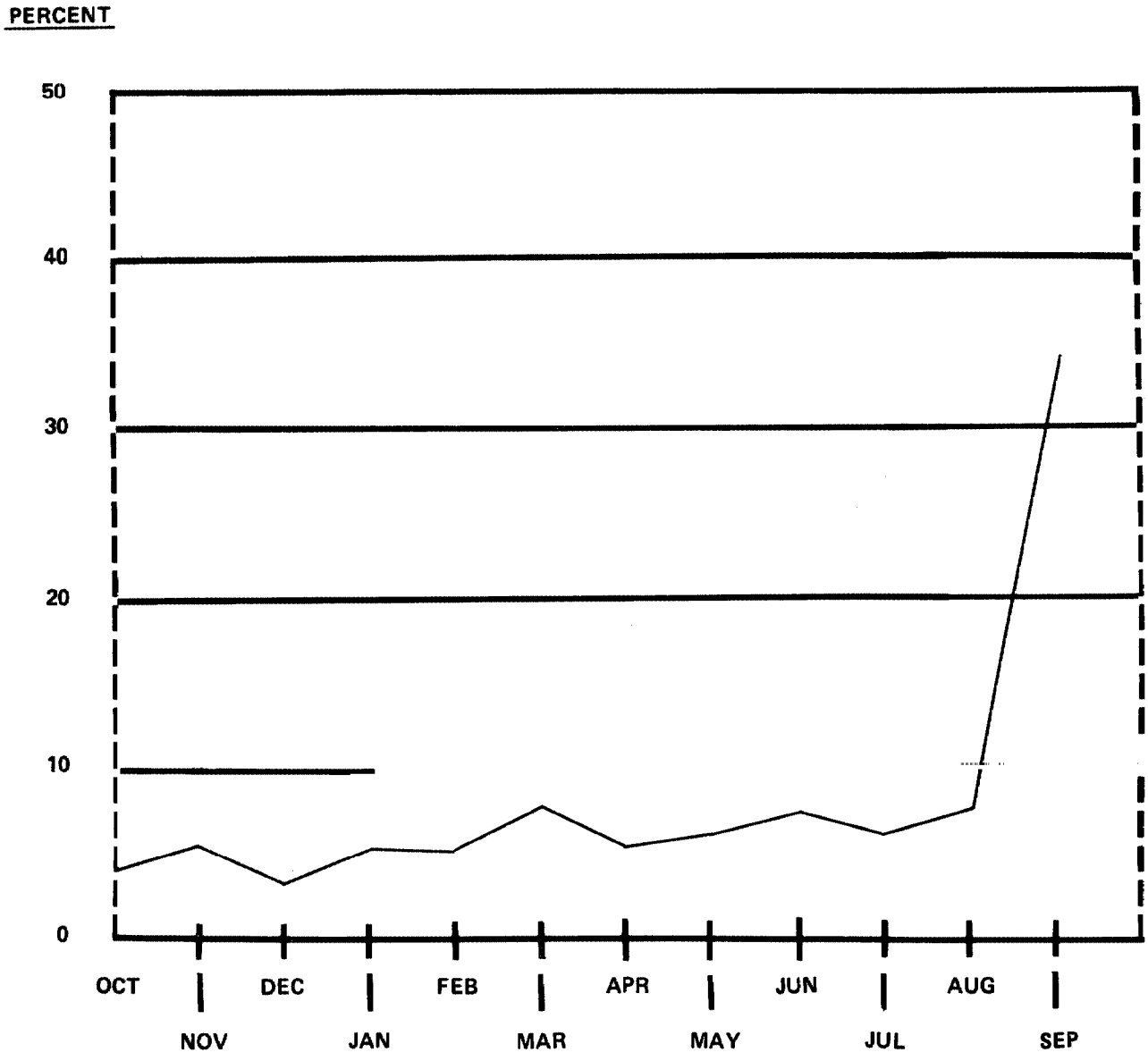


Figure 3

CHAPTER 5

CONCLUSIONS, RECOMMENDATION, AND AGENCY COMMENTS

CONCLUSIONS

In view of the large expenditures for facilities construction and maintenance, it is essential that the Navy, the Material Command, NAVFAC, and PWDs obtain maximum value for each dollar spent. In our opinion, several improvements are necessary to help achieve this goal. We believe that significant savings can be achieved by making improvements in the following areas:

Contract formation

--Planning the use of funds.

--Determination of needs.

--Review of plans and specifications.

--Preaward review of bids and contract provisions.

Contract administration

--Contract enforcement and project acceptance.

--Pricing adjustments.

--Inspection of contractor performance.

--Documentation of actions.

--Payments to contractors.

As noted earlier, NAVFAC does not appear to have adequate procedures to evaluate the operational efficiency and economy of its subordinate EFDs. The operational management of these subordinates is largely decentralized and autonomous. These components appear to rely heavily on internal management reviews, as well as reports by audit agencies. Although EFDs schedule management reviews as part of their internal controls, some reviews have not been performed as scheduled. Also, their effectiveness could be improved if they (1) were expanded from a cursory examination of contract procedures and documentation to a selective test of contracting activities' key internal controls and (2) included follow-up on previously reported problems.

Each of the 26 contracting activities we visited displayed similar problems that, coupled with those disclosed in other audit agencies' reports, demonstrate (1) a widespread pattern of

contract formation and administration problems that cannot be considered as isolated to a few activities or contracts and (2) a need for management to aggressively bring about improvements. Without these improvements, government resources cannot be adequately safeguarded against waste, loss, and misuse, and the problems may continue.

NAVFAC has not developed a formal system to catalog the problems to see if they are occurring NAVFAC-wide. NAVFAC officials said that the problems we identified were isolated and that additional funds for people and training would minimize the problems' recurrence. We believe that the application of more money, training, and personnel alone may be oversimplifying the type of corrective action needed to minimize the recurrence of problems. While there may have been mitigating circumstances due to increasing levels of contracting out and year-end spending, in many of the cases, Navy officials, at different levels of authority, were aware of a problem but either did not or could not take effective corrective action. Therefore, it is difficult to agree that more money, training, and people alone would have adequately protected the Navy's interests. Examples include

--the known roofing problems at the Bangor Trident Submarine Base and the National Naval Medical Center,

--the various known problems with the Indian Head propellant disposal facility,

--the similar known problems at the Jacksonville and Pensacola aircraft painting facilities, and

--the reported problems with the number of security personnel and defective pricing at the Norfolk Naval Shipyard.

We also believe that NAVFAC's management oversight of work contracted and administered by PWDs needs to be improved, especially because this type of workload has greatly increased in recent years.

RECOMMENDATION

To minimize the recurrence of the problems disclosed in this report, we recommend that the Secretary of the Navy direct the Chief of the Naval Material Command and the Commander of the Naval Facilities Engineering Command to improve their management oversight and internal controls over activities having NAVFAC contracting authority by taking the following actions:

--Increase the effectiveness of the Contract Procedures Review Board teams by having them (1) perform reviews as required, (2) review contract administration activities

by testing the effectiveness of contracting activities' key internal controls, and (3) follow up on deficiencies disclosed in these reviews, as well as deficiencies in other internal and external reviews. Follow-up should include recovering, as appropriate, funds improperly expended.

--Systematically assess the results of the Contract Procedures Review Boards' work, as well as the findings in other audit reports, to determine whether reported problems are isolated or whether they are indicators of problems that might be occurring NAVFAC-wide.

--Communicate the results of these assessments throughout NAVFAC to alert field units to conditions that may adversely affect their operations so that corrective or preventive actions can be initiated.

AGENCY COMMENTS

DOD provided written comments on a draft of this report. (See app. XI for DOD's comments.) DOD concurred with most of our findings and fully concurred with our recommendation. It noted that maintenance contracting has undergone very rapid growth, which has contributed to many of the problems. DOD also stated that progress is being made because substantial effort and resources have been devoted to this area since our fieldwork.

DOD's comments on specific areas of disagreement are included in the appropriate sections of the report, along with our evaluation.

CONSTRUCTION PROBLEMS AT THE NAVAL SUBMARINE BASE, BANGOR, BREMERTON, WASHINGTON

In May 1975, the Trident construction officer awarded a contract with an initial price of $20,077,000 for construction of the Trident training facility on the base. This facility experienced leaky roofs due to poor workmanship and maintenance problems due to poor design. Inadequate inspection and enforcement of contract terms resulted in unnecessary costs to correct the problems.

ROOF AND EQUIPMENT MAINTENANCE PROBLEMS

Studies by the base support contractor and a consultant showed the problems were related to poor workmanship. There was evidence of roofing problems even before the roof was complete. The construction office blamed the problems on a poor quality control program by the contractor and the contractor contended that the problem was caused by the specifications. The construction office did not enforce adequate contractor performance and a 2-year roof warranty. The two studies later showed that the contractor had performed improperly. As a result, the Navy spent an estimated $55,000 to make emergency repairs and $40,434 to prepare specifications for roof replacement.

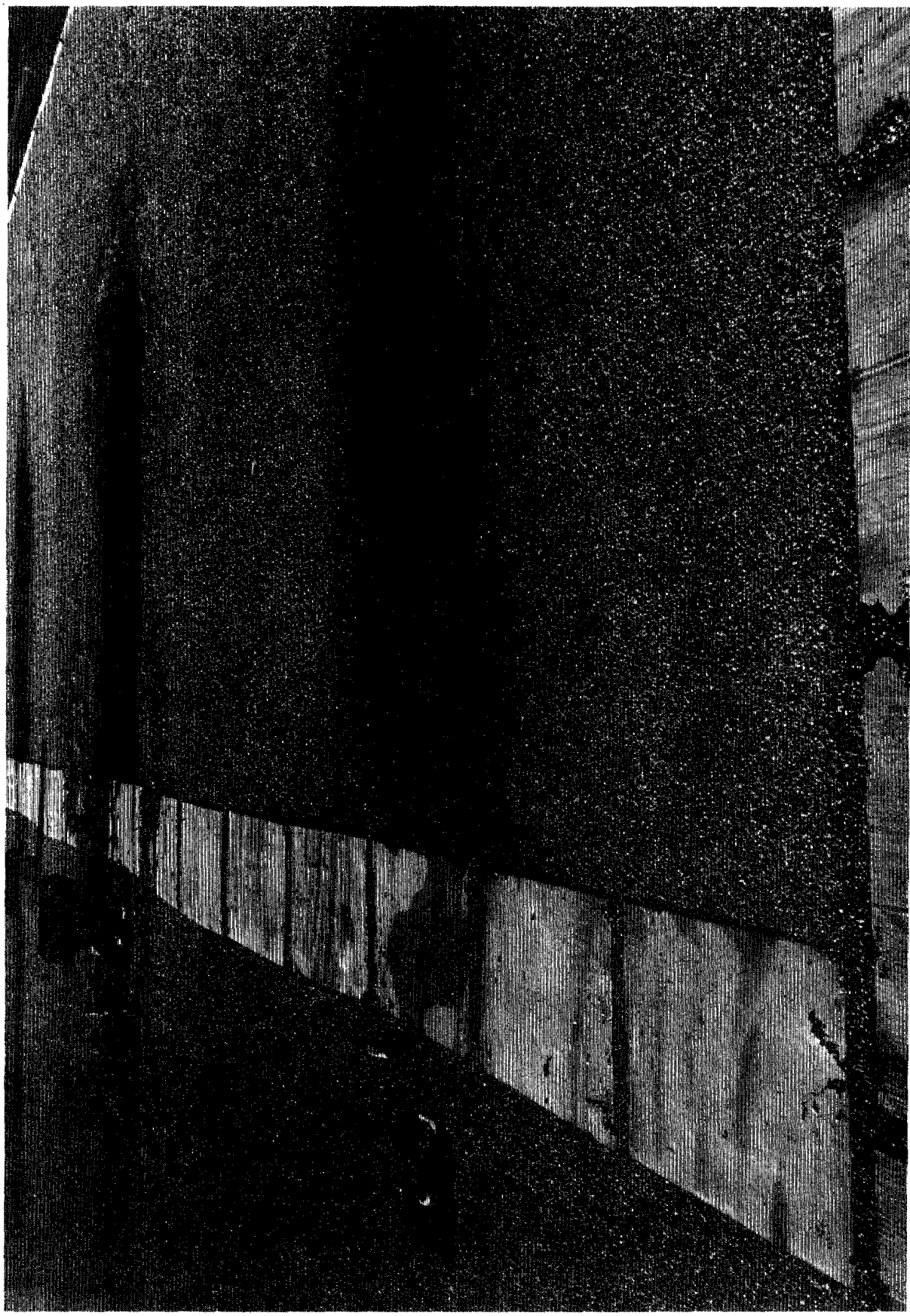
The roof was replaced under a $1,951,571 contract that was also awarded to improve access to air handling equipment that, because of its dangerous location, could not be maintained and broke down. The equipment was to be replaced by other units on top of the building. The Navy is bearing all costs to correct the air handling equipment problems, despite the design error. A construction office official said the Navy did not attempt to recover the costs from the architect-engineering firm because the equipment was placed inside the building at the Navy's direction.

Other buildings on the base have similar roofing problems. As of November 1982, the Navy told us that other contracts totaling $1.5 million had been awarded to correct roofing defects, and that an additional $208,000 had been requested to repair roofs.

APPENDIX I

Blisters on roof. Trident training facility, Naval Submarine Base, Bangor, Bremerton, Washington. (U.S. Navy photo.)

APPENDIX I



Sagging roof and standing water. Trident training facility, Naval Submarine Base, Bangor, Bremerton, Washington. (U.S. Navy photo.)

DEFECTIVE AND SHORTENED LIFE ROOFS AT THE NATIONAL NAVAL MEDICAL CENTER, BETHESDA, MARYLAND

The Chesapeake Division spent over $500,000 of year-end funds to replace roofs at the medical center without using an improved design, which it was considering. Poor workmanship and installation during the winter caused numerous leaks that damaged walls, equipment, carpets, and furniture. Damage in the Presidential suite alone amounted to at least $4,650. Moreover, the roofs seem destined to have a shortened life.

YEAR-END SPENDING CONTRIBUTED TO DEFECTIVE ROOFS

The EFD awarded this contract on September 30, 1981, although it was advised not to do so by a consultant engineering firm, which was under contract to provide roof inspection and consultant services for the EFD. The firm told the EFD that the type of roof specified in the contract had many failures in the past and that it believed the roof would rapidly deteriorate. It recommended an improved, cost-beneficial design, which the EFD was considering for use on other roofs on that structure. A construction official in the EFD concurred; however, the medical center did not accept the consultant's recommendation because it would have delayed contract award into the next fiscal year, which would have resulted in loss of the funds. The EFD acquiesced to its client.

POOR TIMING OF PERFORMANCE CONTRIBUTED TO FAULTY ROOF INSTALLATION

The contract called for work to begin soon after September 30, 1981. The contractor began tearing off the roofs during a rainy period, leaving the deck exposed, and installing the new roofs when outside temperatures were low. Inspection reports noted problems in heating the tar compound used to seal each layer of roofing material and in maintaining the compound at an acceptable temperature while it was being transported to the roofs. The consultant took samples, which showed that the tar compound was inconsistently applied, and concluded that the cause was application of the compound at temperatures below those recommended by the manufacturer. The consultant predicted that this condition would accelerate deterioration of the roofs.

Construction office officials believed exposure and time of installation might have led to water leaks. EFD and medical center officials acknowledged that the winter was the worst possible time to do this work. Their reasons for the poor timing of the contract related to the availability of funding.

According to these officials, awarding the contract with a clause to delay the start of construction work until more favorable weather would have increased the cost beyond the available funding limit.

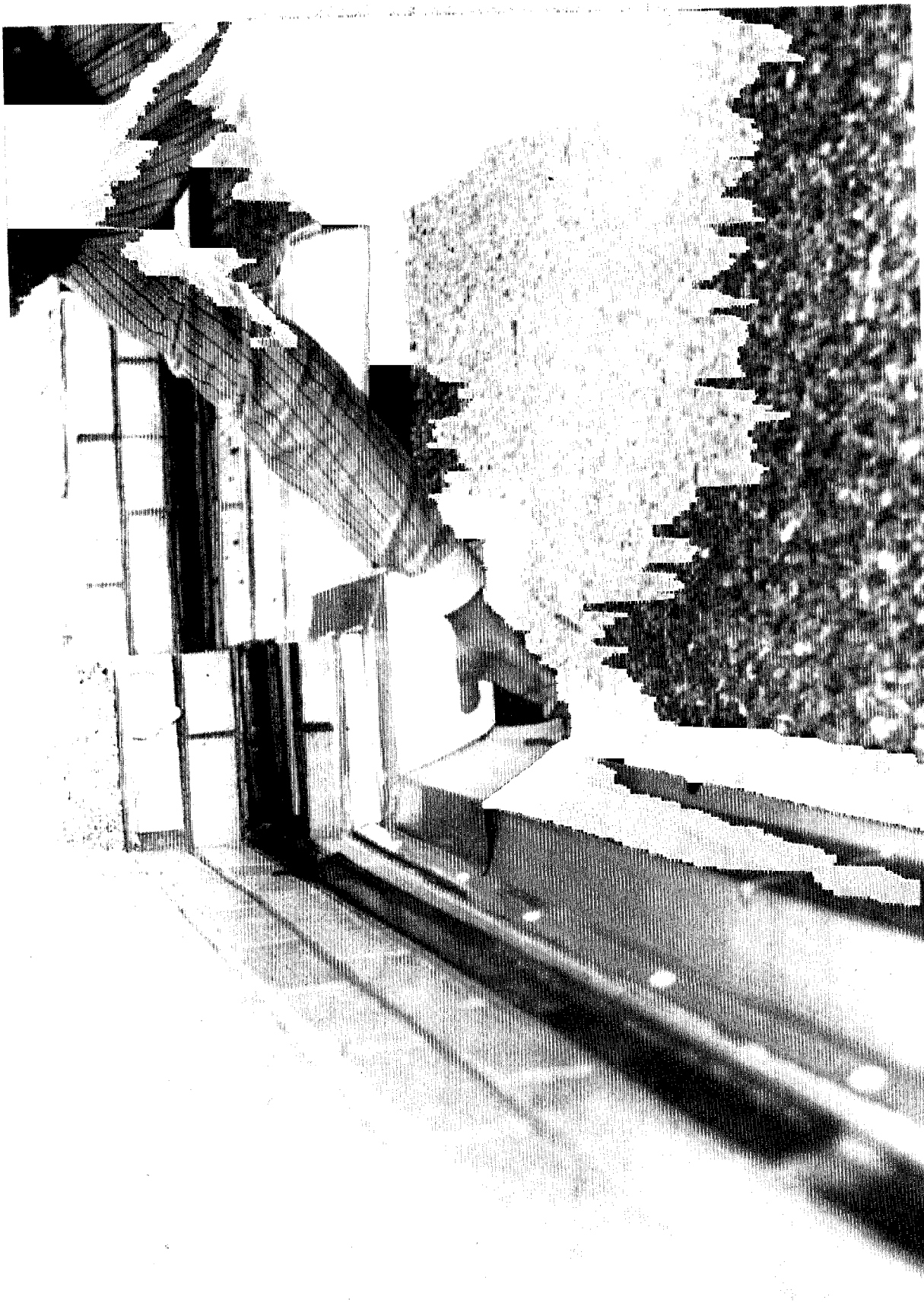
CONSTRUCTION OFFICE DID NOT PROMPTLY AND EFFECTIVELY ACT TO CORRECT CONSTRUCTION PROBLEMS

The construction office did not take prompt and effective action to correct problems. Reports from its inspectors noted that the contractor was not caulking the flashing, as required by the contract, and attributed some of the leaks to this problem. Moreover, the reports noted that a covering used to protect the exposed roof deck from rain, although in compliance with contract specifications, was insufficient.

No effective corrective action was taken. Our inspection of the roofs in October 1982 showed that the flashing still had not been caulked and that the leaks had not been corrected.

At the time of our review, the construction office had not made a final inspection and had not accepted the project. It withheld payment of $52,713 to the contractor to cover correction of the problems, deviation from contract specifications, and water damage.

APPENDIX II



Flashing not caulked. National Naval Medical Center, Bethesda, Maryland. (U.S. Navy photo.)

APPENDIX II

Water damage due to leak. National Naval Medical Center, Bethesda, Maryland. (U. S. Navy photo.)

INADEQUATE AIRCRAFT PAINTING FACILITY ACCEPTED AT THE NAVAL AIR REWORK FACILITY, NAVAL AIR STATION, JACKSONVILLE, FLORIDA

The Navy accepted an aircraft painting facility constructed at the rework facility, even though problems resulting from design and construction needed to be solved. Although some of the problems were attributed to the contractor, inadequate inspection documentation also may have contributed to the problems. While some problems had been corrected, others still existed when our review was completed. Moreover, funding decisions reduced the scope of this project and resulted in the need to consider the renovation of an old facility to make up for the lost capacity.

PERFORMANCE NOT ENFORCED AND ADDITIONAL COSTS INCURRED

In November 1974, the Southern Division awarded a $6.3 million contract to build the facility. During the final inspection made in August 1976, rework facility personnel and others noted 24 deficiencies; however, the contractor was told that the building would be accepted as usably complete. The 1-year warranty period was, therefore, activated before all the problems had been identified or corrected.

A rework facility official notified the EFD in June 1977 that about 13 problems still existed. The construction officer told the contractor that the building would not be transferred to the rework facility until eight documented construction problems were corrected, even though the warranty had begun.

Because of continued contractor work and testing requirements, rework facility personnel did not move into the building until July 1977. At the time the warranty expired, problems remained. Consequently, the rework facility had to fund projects in an attempt to correct the problems, as shown below:

--The rework facility funded a project in September 1980 to replace exhaust fan motors at an estimated cost of $100,000. In addition, the station PWD incurred labor costs of $17,000 to install the fans. This project was considered necessary because the fans had continually failed, and 60 of them had been overhauled since the facility was put into service. The architect-engineer for the project said that the fans approved by the construction officer were undersized and that he had advised the construction officer of this problem on several occasions.

--The rework facility funded another special project in June 1981 to repair heating and ventilating units that had leaked almost continuously since their installation. The leaks were attributed by the contractor in October 1977 to construction deficiencies that had not been corrected. Because the leaks stopped temporarily in November 1977, the month the warranty expired, the contractor made no repairs. However, the leaks reappeared, which necessitated this special project for about $50,000.

--The rework facility also experienced problems with the system filter tanks. The construction contractor delayed coating the tanks beyond the time specified in the contract. This factor, in addition to nonuse of the tanks for about 8 months, caused the tanks to corrode. The rework facility awarded a contract to repair one tank at a cost of about $5,000, but the process proved to be unsuccessful. Accordingly, the rework facility planned to replace the tanks at an estimated cost of $500,000.

Repairs made or considered by the rework facility at the time of our review did not solve all the problems. Accordingly, the rework facility resorted to patchworking the facility to make it operational. For example, the air compressors were disconnected and the control air system was tied into the station's air system. The system humidifiers were also disconnected because they discharged droplets, instead of steam mist, which damaged freshly painted aircraft.

INADEQUATE INSPECTION DOCUMENTATION MAY HAVE CONTRIBUTED TO PROJECT PROBLEMS

Inspectors are responsible for monitoring contractor performance and documenting their inspections. Without adequate documentation, the Navy is in a weak position to enforce contract terms. For at least 13 months, the project inspector did not document inspections, as required. The inspector simply initialed reports the contractor's quality control representatives had prepared. According to the construction officer, the inspector probably believed his work was supplemental to the contractor's inspectors and his preparation of inspection reports would be redundant. EFD officials said Navy inspectors should have prepared inspection reports to document their work. The officials also said construction officers will be notified of the need for inspectors to prepare reports, even if the work is inspected and reports are prepared by contractor representatives.

SCOPE OF PROJECT REDUCED BECAUSE OF HIGH COST

The facility was originally planned to consist of eight cells for painting aircraft, but it was reduced to a smaller facility with six cells because higher than expected contract bids and escalation exceeded the amount of funds available. Moreover, one of the six cells was designed to omit the equipment to make it complete and useful for painting aircraft. The EFD eventually awarded a $478,500 contract to complete this cell and a parking area. Additionally, at the time of our review, a project was being planned to rehabilitate and again use the facility previously used for painting aircraft, which the new facility was supposed to replace.

INOPERABLE $10 MILLION FACILITY AT THE NAVAL ORDNANCE STATION, INDIAN HEAD, MARYLAND

The Navy spent $10 million to design, construct, and equip a propellant disposal facility that has never worked because of design problems. After extensive changes, the construction contract was terminated for the convenience of the government in July 1981. Poor contract administration and lack of documentation precluded action against anyone.

MILLIONS WASTED DUE TO INADEQUATE REVIEW OF SPECIFICATIONS

The Chesapeake Division awarded an architect-engineering contract and approved the resulting contract specifications. EFD officials said that adequate data for defining system capabilities needed to safely dispose of chemical propellants did not exist and that the facility would have been the first of its kind. Therefore, neither the Navy nor the architect-engineer had any past experience on which it could rely.

The EFD approved the system design and on September 30, 1977, awarded a construction contract for $4.2 million, although there was no assurance that the facility would perform as intended. According to EFD officials, their design engineers did not have sufficient knowledge to determine whether the facility, as designed, would be operational. Instead of having the design evaluated by an outside consultant, the EFD evaluated the specifications solely from a construction standpoint and approved the design on that basis.

EFD officials said that because of their lack of knowledge of this type of facility, they did not realize, when they awarded the contract, that the technology for developing the facility was beyond the state-of-the-art. Consequently, they did not recommend that the customer classify the facility as a research and development project. EFD officials now realize that the architect-engineering firm should have been charged with performing research and development work rather than with preparing construction specifications for an untested design.

LACK OF DOCUMENTATION WEAKENED THE NAVY'S POSITION IN ESTABLISHING LIABILITY

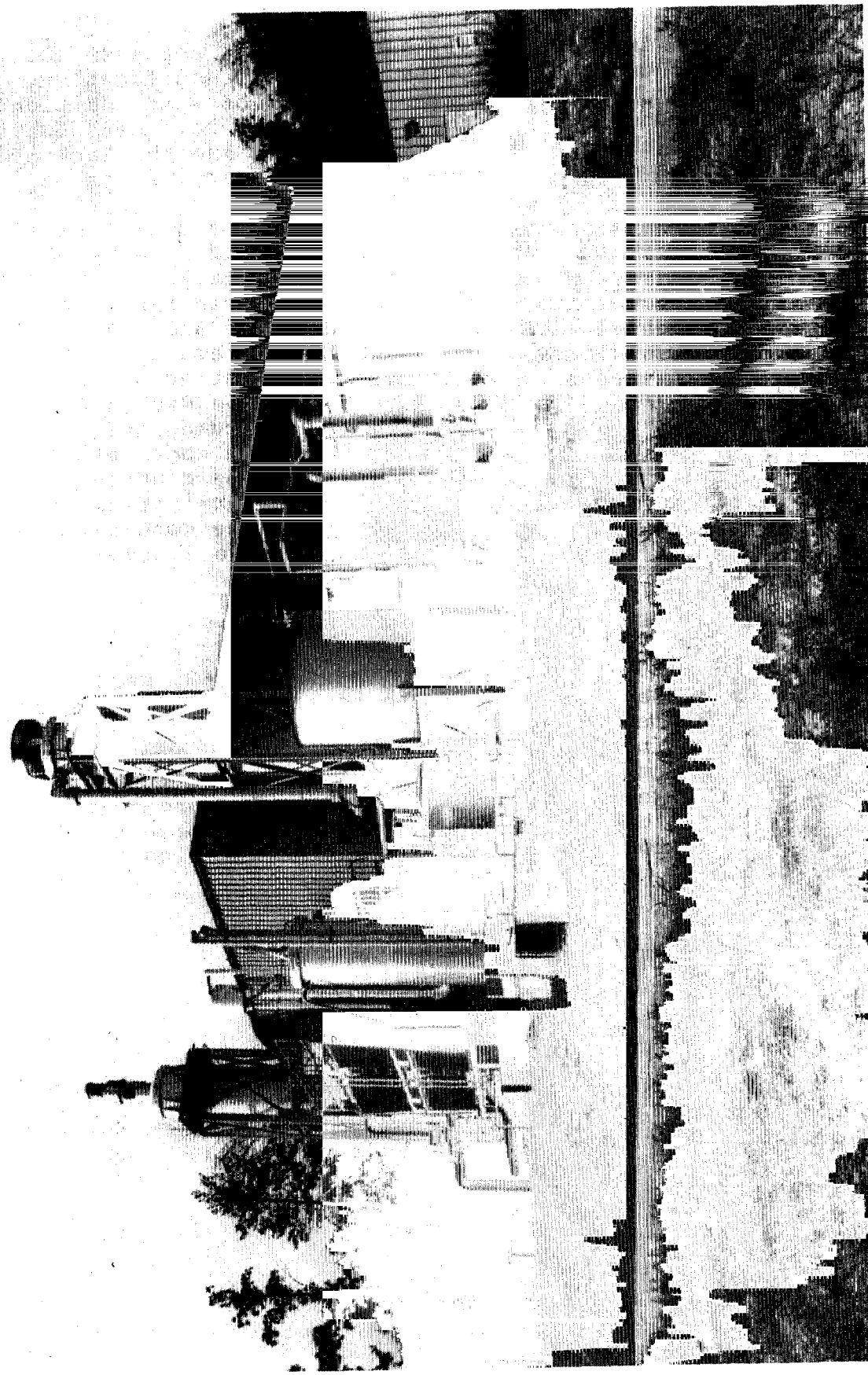
The EFD and the construction officer did not comply with NAVFAC's contracting manual (P-68, section 7-300), which requires all orders changing, modifying, or adding to a contract to be in writing and to be signed by the construction officer or specifically designated assistants. In an attempt to correct design problems and to expedite construction, construction

office officials issued several hundred verbal changes that were never negotiated or finalized with a contract modification. Consequently, the EFD did not have a record of what additional work was to be done and what the price was to be. Although the EFD was aware of the large number of changes and the lack of documentation, it did not take immediate corrective action.

Lack of documentation placed the Navy in a poor negotiating position when the contract was terminated. The purpose of these negotiations was to arrive at a fair and equitable settlement of all change orders and of the contractor's termination claim. Without documents showing the price to be paid and extent of additional work performed, the Navy could not evaluate the contractor's position. In some cases, the contractor provided documentation to support claimed costs that the Navy had initially denied. In other cases, when no documentation was available, the Navy accepted virtually all the contractor's claimed costs. This resulted in increasing the contract price by $1,679,927, which included $1,591,927 in termination costs and $88,000 for lay-up of the facility. At the conclusion of our review, the facility and its equipment were lying idle, with no plans for future use or disposal.

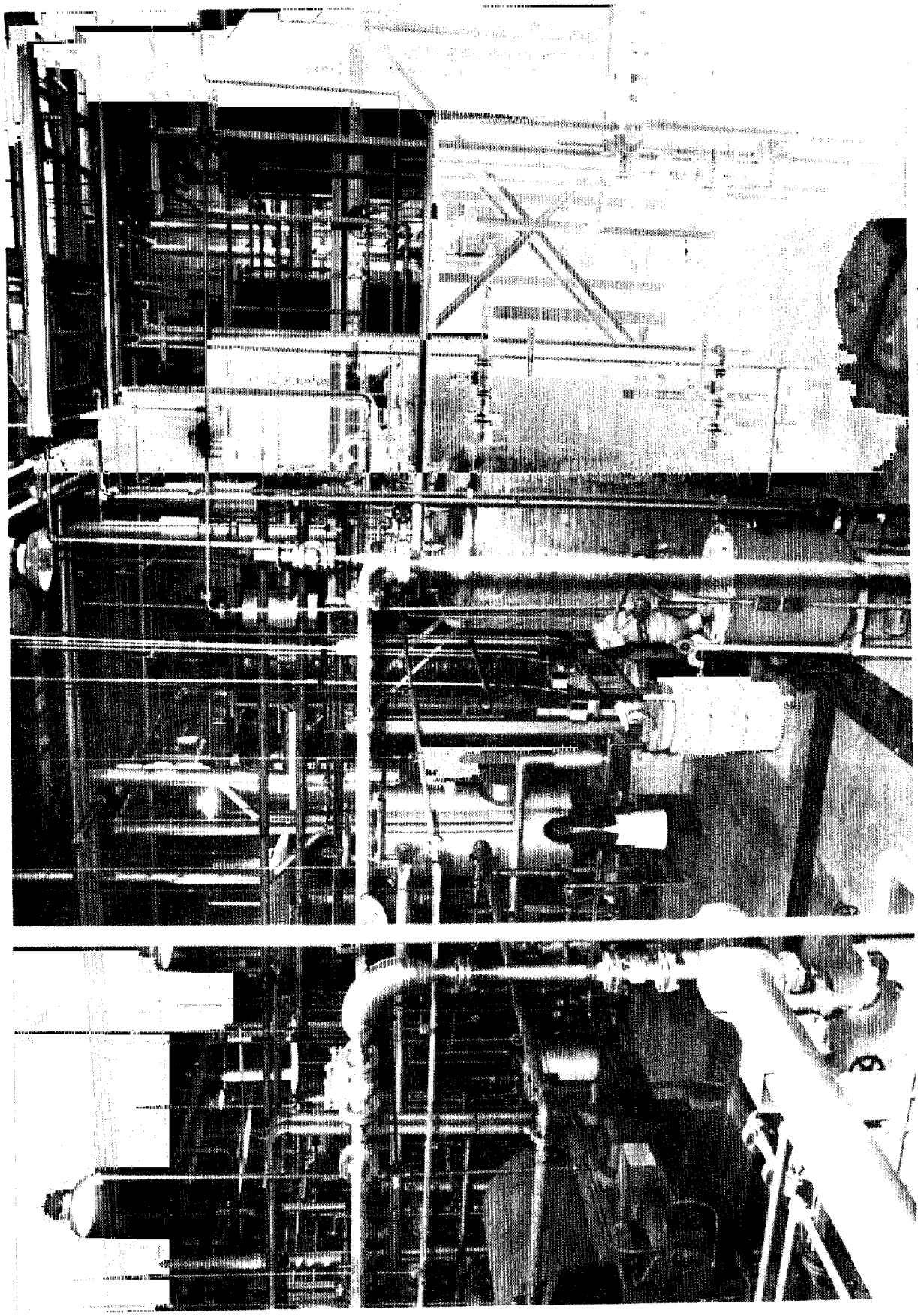
The lack of documentation also precluded the Navy from pursuing potential architect-engineering firm liability in accordance with NAVFAC's contracting manual (P-68, section 7301). This regulation requires the construction officer to consider and document potential architect-engineering liability whenever an error or a deficiency in the specifications results in modifying a construction contract. NAVFAC Instruction 4335.3 further directs the construction officer to forward this documentation to the EFD, which is responsible for evaluating the deficiencies for potential architect-engineering liability.

APPENDIX IV



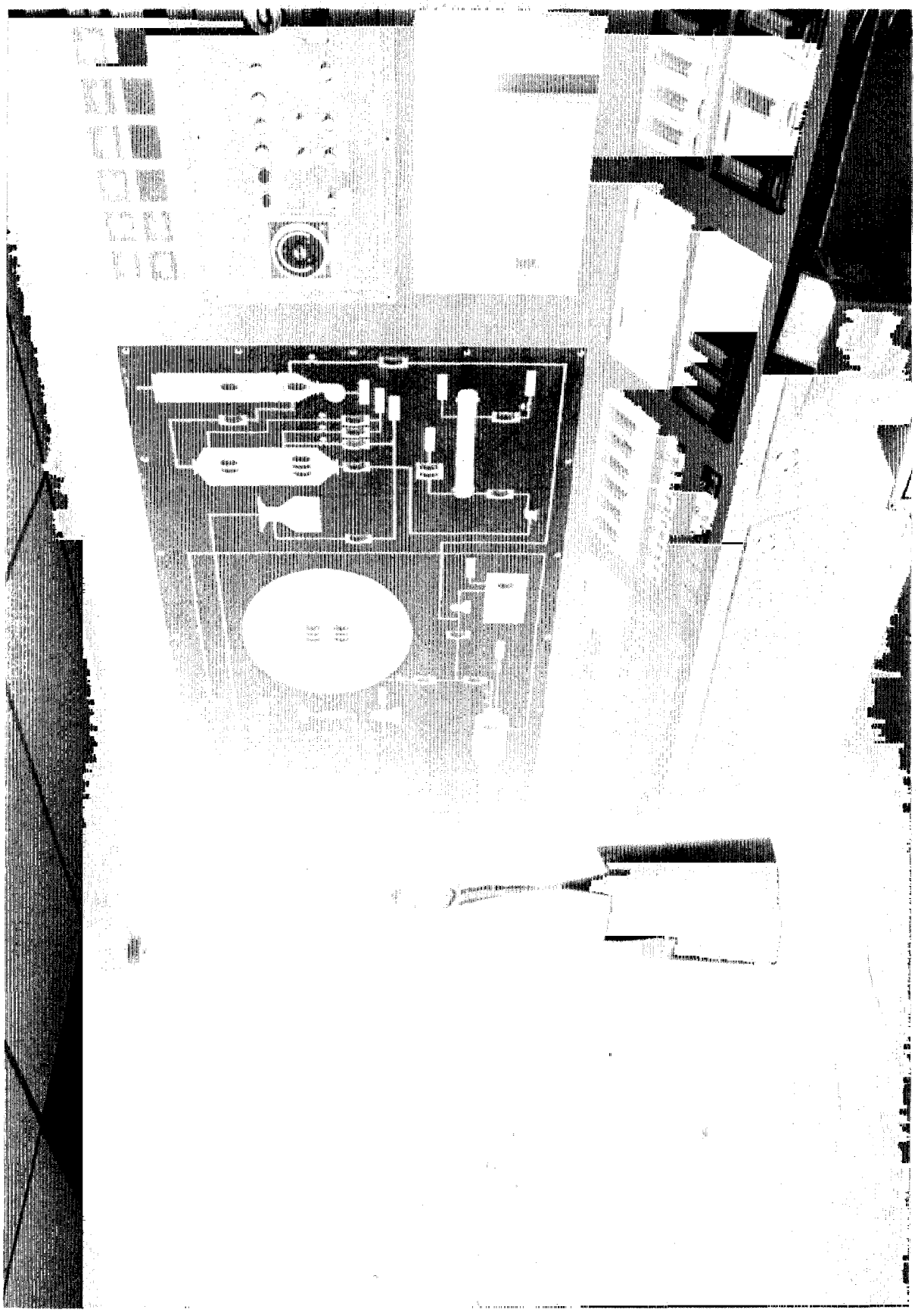
One of 12 abandoned buildings. Propellant disposal facility, Naval Ordnance Station, Indian Head, Maryland. (U.S. Navy photo.)

APPENDIX IV



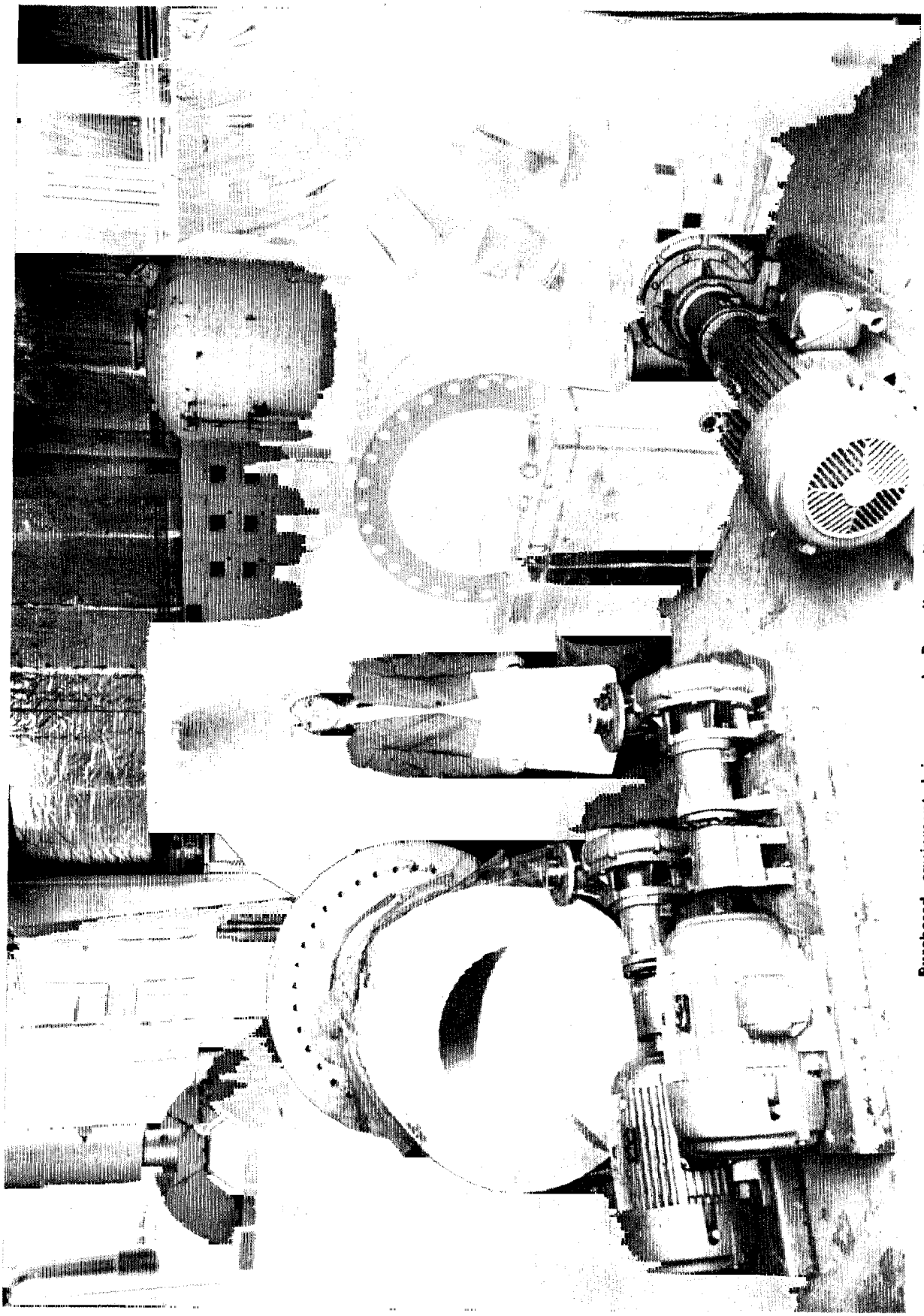
Unused stainless steel process tanks and pipes. Propellant disposal facility, Naval Ordnance Station, Indian Head, Maryland. (U.S. Navy photo.)

APPENDIX IV



Unused fully automated control room. Propellant disposal facility, Naval Ordnance Station, Indian Head, Maryland. (U.S. Navy photo.)

APPENDIX IV



Purchased equipment lying unused. Propellant disposal facility, Naval Ordnance Station, Indian Head, Maryland. (U.S. Navy photo.)

OVERSTATEMENT OF AREA AND POOR QUALITY PAINTING AT THE PHILADELPHIA NAVAL BASE, PHILADELPHIA, PENNSYLVANIA

In October 1981, the construction office awarded a $138,800 indefinite quantity contract for interior painting and plastering of family housing. A lack of adequate inspection and overall administration resulted in overpayments.

We found that weaknesses in contract administration resulted in the problems noted below:

--The specifications included areas that were deliberately overstated to compensate for difficulty in painting. PWD officials acknowledged this but said it was appropriate. However, an EFD official said it was improper. We measured selected areas to be painted in two houses and compared these measurements with those used in bills for payment. We found them overstated by 18 and 25 percent.

--When square footage was not listed on the specifications, the housing office project manager specified the area on the work order. At our request, the Project Manager checked 15 items on 3 work orders. He informed us that his measurements showed a garage door frame and wood post was 56 square feet as opposed to the work order estimate of 380 square feet, a difference of 579 percent. Other items were overstated from 138 to 475 percent. The inspector signed the work orders but did not verify the quantities. Based on our findings, the contracting office said it recouped $897.

--The inspector approved work orders for which the square footage was overstated. The inspector did not measure the area on one work order, which was specified as 2,100 square feet. We measured the area and found that it was only 758 square feet. The resulting overcharge amounted to approximately $201. We informed contracting officials of the overcharge and, as a result, this invoice was not to be paid until the square footages were corrected, and all other invoices of a similar nature were to be reviewed.

--The contractor used a grade of paint inferior to that specified by the contract, but was paid an additional $1,600 based on the more expensive grade. Contracting officials later negotiated a reduction in that amount.

--Poor performance was accepted. Examples of poor performance include painted-over phone jacks, wires, receptacles, wooden stairs, door hinges, white paint overruns on black floor moldings, and a rough, sand-like finish on many semigloss areas.

UNBALANCED BIDS AND OVERPAYMENTS ON A PAINTING CONTRACT AT THE NAVAL AIR STATION, PENSACOLA, FLORIDA

The construction officer awarded two contracts to the same contractor in fiscal years 1981 and 1982 for interior painting of housing for $109,005 and $107,880, respectively. The construction office accepted unbalanced bids on both contracts. Additionally, poor contract administration resulted in overpayments.

CONTRACTING OFFICIALS ACCEPTED OBVIOUSLY UNBALANCED BIDS

The construction office accepted unbalanced bids for these two contracts because it did not update actual work requirements and review the bids, as required. The incumbent contractor took advantage of the situation by bidding $1.00 per square (100 square feet per square) for two grossly overstated line items requiring two coats of paint and $6.50 for one-coat work. The competing contractors bid prices ranging from $6.69 to $11.90. The unbalancing was obvious and permitted the incumbent not only to bid higher prices than normal for the remaining line items, some of which were understated, but also to win the contract. This resulted in unnecessary costs. Had the work statement been based on the previous year's history, or the unbalancing been recognized, and the bidders quoted the same unit prices, the contract would have been awarded to a bidder that did not submit an unbalanced bid, at $13,600 less.

POOR CONTRACT ADMINISTRATION RESULTED IN OVERPAYMENTS

Work requests and related invoices contained numerous errors that contracting officials did not detect because of either inadequate review or unfamiliarity with contract terms. As a result, many overpayments were made. Some typical examples follow:

--In 1981, the contractor painted a housing unit, which contained 66 squares, with two coats of paint. The contractor should have been paid only $1 per square, or $66, as specified in the obviously unbalanced contract. Instead, the contractor was paid for painting 132 squares at $7 per square, the contract price for painting one coat. Thus, the contractor was overpaid $860. A similar situation resulted in a $120 overpayment under the 1982 contract.

--The contractor was paid twice on the same invoice for painting the same unit, for an overpayment of about $160.

--The work request for a housing unit authorized painting 10 squares for the hall, stairwell, and touch-up as needed. The contractor charged and was paid for painting the entire unit (58.13 squares), which resulted in an overpayment of $337.

APPENDIX VII

WEAK CONTRACT ADMINISTRATION FOR JANITORIAL SERVICE AT THE NAVAL AIR DEVELOPMENT CENTER, WARMINSTER, PENNSYLVANIA

A janitorial service contract awarded for $647,248 in January 1981 was renewed through a change order in January 1982, and by September 1982, it was valued at $1,534,225. The contract was poorly administered.

POOR INSPECTION AND VERIFICATION

Our limited review of payments disclosed that the systems for inspection and verification were deficient. For example:

--Inspectors did not complete inspection reports daily.

--The contract did not have a required quality assurance plan, and the project manager told us that the inspectors did not have the training to implement a plan if it existed.

--Supervisory inspectors did not report several inspections of rest rooms and stairs where work was unsatisfactory. The loss to the Navy was $262.

--The project manager did not detect mathematical errors resulting in $384 of overpayments.

--Four prompt payment discounts, totaling $4,625, were lost because invoices were not paid within the discount period.

We were told that, due to problems of inspection and the uncooperativeness of the contractor, the inspector and supervisory inspector recommended not renewing this contract. For administrative expediency, the contracting office issued a change order and extended the old contract instead of drafting a new contract using NAVFAC guidelines, correcting square footages, and preparing a quality assurance plan as required. The EFD did not detect the problems because it did not review the contract or the extension.

PROHIBITED CONTRACT PROVISION AND MISUSE OF FAMILY HOUSING MAINTENANCE CONTRACT AT THE PHILADELPHIA NAVAL BASE, PHILADELPHIA, PENNSYLVANIA

In March 1981, the construction office awarded an open-ended contract for family housing maintenance. The contract had a minimum threshold of $30,000 and a maximum of $700,000. The construction office used the minimum and maximum provisions because it had not kept historical usage data and, therefore, could not accurately estimate its needs. Further, funds were wasted due to weaknesses in contract formation and administration.

SAVINGS CAN BE REALIZED BY IMPROVING CONTRACT FORMATION AND ADMINISTRATION

Eliminating the problems discussed in the following sections can result in significant savings.

Lack of usage data

The Family Housing Office did not accumulate historical line item usage data. Such data are needed to prepare accurate work statements for future contracts and to properly evaluate bids.

Prohibited provision in contract

The contract included a provision for materials reimbursement at cost-plus-a-percentage-of-cost, which is a prohibited type of contracting. The contracts manager at the Northern EFD said that, in his opinion, this provision was not prohibited and that contract specifications have been written with this provision for many years. The Assistant Commander for Contracts at NAVFAC Headquarters agreed with us that this provision was prohibited. We found 11 additional contracts with this feature at the base.

Questionable payments for materials and services not specifically covered by the contract

Although the contract's scope of work was the maintenance of family housing, some goods and services purchased under this contract were outside the scope of contract work. For example, the construction office used this contract for

--buying supplies for the self-help store ($4,118);

--purchasing office supplies, business cards, and smoke detectors ($340);

--providing dishwashers for Senior Officers' Quarters ($1,418);

--mowing lawns ($210);

--providing gardening service ($450);

--handing out flyers ($308); and

--delivering newsletters on base ($375).

Payment vouchering weaknesses

Internal controls over material costs are required to allow proper verification from the contractor's sales invoices to the individual work orders. The contractor submitted all sales invoices in a batch, without indicating which invoice applied to which work order. Without the ability to trace material costs, errors could not be detected.

SUMMARY OF

NAVAL FACILITIES ENGINEERING COMMAND

PROCUREMENT PROBLEMS AND RELATED EFFECTS

NOTED DURING GAO REVIEW

This appendix identifies the contracting activities visited and the construction and maintenance contracts reviewed. It also summarizes procurement problem areas and the effects of the problems.

Where effects could be quantified accurately, we used the figures. In cases where the Navy could still take action to mitigate the effects of the problems or the quantification would be too judgmental, we used the descriptors "unnecessary cost" and "additional cost." The former was used when the cost could have been avoided entirely, with the application of good procurement management; the latter was used when at least some of the cost could not have been avoided. "Unnecessary" connotes waste, while "additional" connotes inefficiency. For example, on Long Beach Naval Shipyard contract N62474-81-C-8490, the obstruction had to be removed to install the pipeline. This is an "additional" cost of $200,000 because it could have been lessened had the work been included in the plans, which would have been subjected to the effects of competition, which we could not measure with any accuracy. This same contract, however, experienced an "unnecessary" cost of $300,000 due to delay, which could have been avoided had the obstruction been included in the plans.

The entries under Procurement Problem Area parallel the captions used in chapters 2 and 3. Used here, we endeavored to apply only the essential Problem Area and to minimize overlapping. Entries under Related Effect do not necessarily correspond to the problem areas on a line-by-line basis. In some cases, there were a number of effects stemming from a lesser number of problem areas, and vice versa. Values in the amount column are contract amounts, adjusted for changes as of the date of our review.

SUMMARY OF PROCUREMENT PROBLEM AREAS AND RELATED EFFECTS

CONSTRUCTION CONTRACTS

Southern Engineering Field Division

Installation	Contract No.	Amount ($000)	Item	Procurement Problem Area	Related Effect
Jacksonville Naval Air Station	N62467-72-C-0334	6,324	Aircraft painting facility	Review of plans and specifications Documentation of inspection Contract enforcement/project acceptance Documentation of actions	Underutilized facility Occupancy delayed Major problems outstanding Benefits of warranty lost Unnecessary cost Additional cost likely
Pensacola Naval Air Station	N62467-76-C-0492	7,745	Aircraft painting facility	Same as above	Same as above
	N62467-82-C-2065	3	Exterior painting	Planning the use of funds	Lost $1,000 due to delay
Pensacola Naval Complex	N62467-81-C-2073	109	Interior painting	Determination of needs Contract enforcement/project acceptance Payments to contractor	Unbalanced bid could cost $13,600
	N62467-82-C-2074	108	Interior painting	Determination of needs Contract enforcement/project acceptance	Unnecessary cost of $11,000 Excess painting
Whiting Field Naval Air Station	N62467-81-C-2858	31	Interior painting	Determination of needs	Unnecessary cost
	N62467-82-C-2868	38	Interior painting	Documentation of inspection Determination of needs Payments to contractors	Questionable basis for payment Work outside scope

Western Engineering Field Division

Long Beach Naval Station	N62474-81-C-6725	571	Repair bachelor officer quarters	Contract enforcement/project acceptance	Unsatisfactory product
Long Beach Naval Shipyard	N62474-81-C-8490	4,928	Install pipeline	Review of plans and specifications	Project delayed, unnecessary cost of $300,000 Additional cost of $200,000
Naval Submarine Base, Bangor	N68248-75-C-5001	25,688	Trident training facility	Review of plans and specifications Contract enforcement/project acceptance	Equipment breakdown; defective roofs Unnecessary cost of $1,952,000
	N68248-80-C-8770	155	Drainage improvement	Review of plans and specifications	Project delayed; additional cost of $17,000
Naval Undersea Warfare Engineering Station	N68248-76-C-6020	3,102	Munitions processing building	Inspection of contractor performance	Diminished usefulness of facility Additional cost of $298,000

APPENDIX IX

Chesapeake Engineering Field Division

Installation	Contract No.	Amount ($000)	Item	Procurement Problem Area	Related Effect
National Naval Medical Center	N62477-81-C-0400	591	Replace roofs	Planning the use of funds Review of plans and specifications Contract enforcement/project acceptance	Roofs will likely need early replacement. Damage to equipment and furnishings. Additional and unnecessary costs
	N62477-79-C-)447	1,373	Renovate enlisted club	Contract enforcement/project acceptance	Unsatisfactory product
	N62477-80-C-3214	91	Renovate space for pressure laboratory	Planning the use of funds Review of plans and specifications Documentation of inspection Contract enforcement/project acceptance	Inoperable facility; additional and unnecessary costs
Naval Ordnance Station, Indian Head	N62477-74-C-0333	6,434	Propellant disposal facility	Review of plans and specifications Documentation of actions	Useless facility; unnecessary cost of $10,000,000; additional cost likely
	N62477-79-C-7042	204	Install environmental control system	Review of plans and specifications	Partially inoperable facility; additional and unnecessary cost; delay
Northern Engineering Field Division					
Naval Air Development Center	N62472-81-C-4800	283	Repair roof	Determination of needs	Unnecessary cost likely; reduced competition on contract 4801
	N62472-81-C-4801	250	Repair roof	Review of plans and specifications	
	N62472-81-C-4766	155	Repair buildings	Review of plans and specifications	Reduced competition; unnecessary cost likely
Philadelphia Naval Base	N62472-81-D-4660	139	Interior painting and plastering	Determination of needs Inspection of contractor performance Payments to contractors	Unsatisfactory product; unnecessary cost
Atlantic Engineering Field Division					
Norfolk Naval Shipyard	N62470-79-C-2526	12,476	Overhaul cranes	Planning the use of funds Determination of needs Pricing adjustments	New cranes would have been less expensive than rebuilding the old ones; materials were bought to rebuild 4 cranes while a study showed only 2 were needed, subsequently 1 of the old cranes was demolished. Defective pricing in the amount of $532,000 has not been recovered. Operations and Maintenance funds were improperly used to rebuild these cranes. Additional and unnecessary costs.

APPENDIX IX

Atlantic Engineering Field Division

Installation	Contract No.	Amount ($000)	Item	Procurement Problem Area	Related Effect
Naval Amphibious Base, Little Creek	N62470-82-C-4930	110	Building renovation	Review of plans and specifications Documentation of inspection Documentation of actions	Poor workmanship; additional cost likely
	N62470-82-C-4273	114	Building renovation	Determination of needs Review of plans and specifications	Poor design; understated needs; additional cost likely
Naval Base, Guantanamo Bay	N62470-78-C-8285	10,491	Operate desalinization plant	Documentation of inspection Payments to contractor	Lost $2,000 payment discount; questionable payments for invoiced work
	N62470-81-C-2161	71	Exterior painting	Documentation of inspection Payments to contractor	Unsatisfactory product
	N62470-81-C-2156	84	Exterior painting	Documentation of inspection Payments to contractor	Questionable basis for payments for invoiced work
	N62470-81-C-2159	99	Fencing	Review of plans and specifications	Changes required; additional cost
Oceana Naval Air Station	N62470-81-C-1048	30	Install sprinkler system	Review of plans and specifications	Unnecessary and additional costs of $11,000
	N62470-81-C-1173	1,896	Squadron training building	Review of plans and specifications Documentation of inspection	Additional cost of $83,000 Unsatisfactory contractor performance Delay in use of facility
	N62470-82-C-4100	22	Painting	Documentation of inspection	Unsatisfactory product
	N62470-82-C-4173	165	Painting	Documentation of inspection	Unsatisfactory product
	N62470-82-C-4190	24	Insulation repairs	Payments to contractor	Health hazard; unsatisfactory work

APPENDIX IX

MAINTENANCE CONTRACTS

Southern Engineering Field Division

Installation	Contract No.	Amount ($000)	Item	Procurement Problem Area	Related Effect
Whiting Field Naval Air Station	N62467-80-C-2863	540	Family housing maintenance	Contract enforcement/project acceptance Payments to contractor Documentation of actions	Administrative costs associated with rework not collected
Pensacola Naval Air Station	N62467-79-C-2101	1,280	Refuse collection	Documentation of inspection	No assurance that valuable scrap was recovered
	N62467-82-C-2072	613	Refuse collection		
Western Engineering Field Division					
Whidbey Island Naval Air Station	N62474-81-C-6522	278	Janitorial and window cleaning services	Inspection of contractor performance	Required work could not be performed Unnecessary cost of $3,000
	N62474-81-D-3765	134	Asphalt paving	Inspection of contractor performance Documentation of actions	Unsatisfactory performance; thickness less than required; no quality assurance plan
	N62474-82-D-3766	200	Interior painting	Determination of needs Inspection of contractor performance	Too frequent painting Unnecessary work and cost
Chesapeake Engineering Field Division					
Naval Ordnance Station, Indian Head	N62477-81-C-7005	1,173	Janitorial service	Determination of needs Review of plans and specifications Inspection of contractor performance	No quality assurance plan Area overstated; unnecessary cost of $53,000 and possibly as much as $96,000
Northern Engineering Field Division					
Philadelphia Naval Base	N62472-81-D-4522	700	Family housing maintenance	Determination of needs Payments to contractor	Cost-plus-a-percent-of-cost feature in contract; contract used to perform non-contract work; unnecessary cost
Naval Air Development Center	N62472-81-C-4736	1,534	Janitorial service	Inspection of contractor performance Documentation of actions Payments to contractors	No quality assurance plan Unnecessary cost of $5,000 due to lack of verification, and discounts lost
	N62472-81-C-5963	205	Family housing maintenance	Documentation of actions	Loss of administrative control

APPENDIX IX

Atlantic Engineering Field Division

Installation	Contract No.	Amount ($000)	Item	Procurement Problem Area	Related Effect
Naval Amphibious Base, Little Creek	N62470-82-C-3929	70	Street striping	Review of plans and specifications Inspection of contractor performance Contract enforcement/project acceptance	No quality assurance plan; unnecessary cost; unable to verify contractor's billings
	N62470-82-C-8171	6	Roof repair	Planning the use of funds Inspection of contractor performance	Requirements not consolidated into one contract
Naval Base, Guantanamo Bay	N62470-80-C-4657	683	Equipment maintenance and repair	Inspection of contractor performance Pricing adjustments Payments to contractor	Unnecessary cost; some recoupment made as a result of this audit; cost-plus-a-percent-of-cost feature in contract; inadequate verification of contractor billings; additional and unnecessary costs likely
	N62470-80-C-3545	418	Equipment maintenance and repair	Same as above	Same as above
	N62470-81-C-2168	218	Vehicle repair	Payments to contractors	Cost-plus-a-percent-of-cost feature in the contract; unnecessary cost; recoupment made as a result of this audit; additional cost likely
	N62470-80-C-4653	1,973	Family housing maintenance	Determination of needs Payments to contractor	No quality assurance plan Debarred company awarded the contract Unnecessary cost; some recoupment made as a result of this audit
	N62470-81-C-2158	234	Custodial and bus service	Inspection of contractor performance	Questionable basis for payment to contractor
Oceana Naval Air Station	N62470-81-C-4759	590	Family housing maintenance	Inspection of contractor performance Payments to contractor	Unsatisfactory product Unnecessary cost; additional cost likely
	N62470-80-C-2549	129	Fire protection system maintenance	Inspection of contractor performance Payments to contractors	Unsatisfactory product: control valves inaccessible
	N62470-80-C-2577	348	Air-conditioning maintenance	Inspection criteria	No quality assurance plan

APPENDIX IX

Atlantic Engineering Field Division

Installation	Contract No.	Amount ($000)	Item	Procurement Problem Area	Related Effect
Oceana Naval Air Station	N62470-81-C-3105	65	Filter maintenance	Inspection of contractor performance	Inadequate inspection schedule
Norfolk Naval Shipyard	N62470-80-C-4217	668	Fire hydrant maintenance	Inspection of contractor performance	Unsatisfactory product
	N62470-80-C-2947	131	Cleaning catch basins	Inspection of contractor performance Documentation of actions	Unsatisfactory product; additional cost likely
	N62470-80-C-3769	274	Plumbing and heating maintenance	Determination of needs Review of plans and specifications	Inaccurate contract requirements used Unnecessary cost likely
	N62470-80-C-2905	3,094	Refuse collection and disposal	Review of plans and specifications Inspection of contractor performance	Unnecessary cost likely
	N62470-79-C-2588	6,995	Janitorial service	Inspection of contractor performance	Unnecessary cost likely
	N62470-81-C-2759	284	Bus and taxi service	Inspection of contractor performance	Unnecessary cost likely
	N62470-81-C-2831	2,541	Guard services	Determination of needs	Unnecessary cost likely

APPENDIX IX

LIST OF AUDIT REPORTS OF CONTRACTING PROBLEMS IN THE NAVAL FACILITIES ENGINEERING COMMAND

GAO

--To the Secretary of Defense, Further Improvements Needed in Navy's Oversight and Management of Contracting for Facilities Construction on Diego Garcia (GAO/NSIAD-84-62, May 23, 1984).

--To Congressman G. William Whitehurst, Navy Has Housing Problems at Virginia Beach and Scrap Metal Disposal Problems at Sewells Point (PSAD-80-73, September 19, 1980).

--To the Congress, Better Management Needed in DOD to Prevent Fraudulent and Erroneous Contract Payments and to Reduce Real Property Maintenance Costs (PSAD-80-14, January 9, 1980).[1]

DEFENSE AUDIT SERVICE

--Audit of Construction Contract Change Orders (82-133, August 25, 1982).

NAVAL AUDIT SERVICE

Fiscal Year 1983

A-41562L Naval Air Station, Key West, Florida

A-41362L Naval Air Station, Atlanta, Marietta, Georgia

A-30922L Naval Ordnance Station, Indian Head, Maryland

A-10432L Navy Public Works Center, San Diego, California

A-10343L Officer in Charge of Construction, Naval Facilities Engineering Command, Contracts, Guam, Mariana Islands

A-10232L Pacific Division, Naval Facilities Engineering Command, Pearl Harbor, Hawaii

C-17322L Naval Construction Battalion Center, Port Hueneme, California

[1]Follow-up action on this report included a letter to the Secretary of Defense on $655,000 in improper or questionable charges submitted by two contractors in the Sewells Point, Virginia, area (August 30, 1982).

C-12523L Family Housing Management, Marine Corps Base, Camp Pendleton, California

S-40172 Audit of the Cost, Quality, and Responsiveness of Public Works Services Provided to Navy and Marine Corps Activities

T-40371 Multilocation Audit of Shipyard Production Facilities.

Fiscal Year 1982

A-41442/ 41442L Navy Public Works Center, Pensacola, Florida

A-41222L U.S. Naval Station, Roosevelt Roads, Puerto Rico

A-31111 Chesapeake Division, Naval Facilities Engineering Command, Washington, D.C.

A-10452L Navy Public Works Center, San Francisco Bay, Oakland, California

A-10442L U.S. Navy Public Works Center, Yokosuka, Japan

A-10422L Navy Public Works Center, Pearl Harbor, Hawaii

A-10111L Western Division, Naval Facilities Engineering Command, San Bruno, California

C-42971L Marine Corps Air Station, Cherry Point, North Carolina

C-42862L Marine Corps Base, Camp Lejeune, North Carolina

C-22711L Portsmouth Naval Shipyard, Portsmouth, New Hampshire

C-22641L Philadelphia Naval Shipyard, Philadelphia, Pennsylvania

C-13812L Pearl Harbor Naval Shipyard, Pearl Harbor, Hawaii

Fiscal Year 1981

A-41871L U.S. Naval Station, U.S. Naval Base, Guantanamo Bay, Cuba

A-41620 Naval Weapons Station, Yorktown, Virginia

A-41360 Naval Air Station, Memphis, Millington, Tennessee

A-31680 National Naval Dental Center, Bethesda, Maryland

A-31111L Chesapeake Division, Naval Facilities Engineering Command, Washington, D.C.

A-20930 Officer in Charge of Construction, Naval Facilities Engineering Command, Contracts, Mediterranean, Madrid, Spain

A-20880 Northern Division, Naval Facilities Engineering Command, Philadelphia, Pennsylvania

A-10430 Naval Station, Pearl Harbor, Hawaii

C-43630 Charleston Naval Shipyard, Naval Base, Charleston, South Carolina

C-42941L Marine Corps Air Station, Cherry Point, North Carolina

C-22730 Portsmouth Naval Shipyard, (Procurement), Portsmouth, New Hampshire

C-22650 Philadelphia Naval Shipyard, Philadelphia, Pennsylvania

C-11920/ 11930 Puget Sound Naval Shipyard, Bremerton, Washington

S-40101 Special Review of Certain Contract Administration Performance and Practices within the Norfolk Naval Shipyard, Portsmouth, Virginia

T-40329 Maintenance Service Contracts Administered by Officers in Charge of Construction/Resident Officers in Charge of Construction

Fiscal Year 1980

A-41609 Atlantic Division, Naval Facilities Engineering Command, Norfolk, Virginia

A-41329 Navy Public Works Center, Naval Air Station, Pensacola, Florida

A-41219 U.S. Naval Air Station, Bermuda

A-20709 Navy Public Works Center, Great Lakes, Illinois

A-20649 U.S. Naval Station, Keflavik, Iceland

A-10500 Officer in Charge of Construction, Naval Facilities Engineering Command, Contracts, Marianas

A-10339 Navy Public Works Center, Pearl Harbor, Hawaii

A-10228 Western Division, Naval Facilities Engineering Command, San Bruno, California

A-10159 Navy Public Works Center, San Francisco Bay, Oakland, California

A-10049 Naval Air Station Lemoore/Commander, Light Attack Wing, U.S. Pacific Fleet

C-42829 Marine Corps Base, Camp Lejeune, North Carolina

C-42819 Marine Corps Base, Camp Lejeune, North Carolina

C-12540 Selected Fidelity Areas at Marine Corps Base, Camp Pendleton

C-11919 Puget Sound Naval Shipyard, Bremerton, Washington

Second Half of Fiscal Year 1979

A-41408 Southern Division, Naval Facilities Engineering Command, Charleston, South Carolina

A-11758 Pacific Division, Naval Facilities Engineering Command, Pearl Harbor, Hawaii

A-10539 Commander U.S. Naval Forces, Philippines/U.S. Naval Base, Subic Bay, Republic of the Philippines

A-10519 U.S. Naval Air Station, Cubi Point. Luzon, Republic of the Philippines

A-10469 U.S. Naval Air Facility, Midway Island

A-10148 Naval Air Reserve Unit, Point Mugu, California

C-42828 Marine Corps Base, Camp Lejeune, North Carolina

C-13519 Long Beach Naval Shipyard, Long Beach, California

Others

A-62107 Officer in Charge of Construction, Trident, Bremerton, Washington, December 8, 1977

C-42048 Norfolk Naval Shipyard, Portsmouth, Virginia, February 19, 1979

APPENDIX XI

THE UNDER SECRETARY OF DEFENSE

WASHINGTON, D.C 20301-3010

RESEARCH AND
ENGINEERING

10 OCT 1984

Mr. Frank C. Conahan
Director, National Security and
International Affairs Division
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Conahan:

This is the Department of Defense response to your letter of August 13, 1984 which transmitted your Draft Report (GAO Code No. 942059) entitled, "The Navy Needs to Strengthen Facilities Construction and Maintenance Contracting Practices and Management Controls," (OSD Case No. 6585).

The Department of Defense basically concurs with your report and its findings and recommendations. Maintenance contracting (or Facilities Support Contracting as it is called in the Navy) has undergone very rapid growth, which contributed to many of the problems noted in your report. Substantial effort and resources have been devoted to this area since your field work, and progress is being made.

Comments provided in the attached response address each of the findings and recommendations contained in the draft report. We appreciate the opportunity to comment on this report in draft form.

Sincerely,

Jim Wade

Jr.

Attachment

APPENDIX XI

GAO DRAFT REPORT DATED AUGUST 13, 1984
(GAO CODE NO. 942059) OSD CASE NO. 6585

"THE NAVY NEEDS TO STRENGTHEN FACILITIES CONSTRUCTION AND MAINTENANCE CONTRACTING PRACTICES AND MANAGEMENT CONTROLS"

* * * * *

FINDINGS

FINDING A: Broad Range of Problems With Naval Facilities Engineering Command (NAVFAC) Contracting Practices And Management Controls: Improvements Needed. GAO reported that NAVFAC, which is one of five subordinate commands under the Naval Material Command, is responsible for providing the design, construction and maintenance services for shore facilities needed by the Navy's operating commands. In reviewing 33 construction and 28 facilities maintenance contracts at 26 Navy contracting activities, GAO found a broad range of costly contract formulation and administration problems. According to GAO, each of the 26 contracting activities it visited displayed similar problems that, coupled with those disclosed in other audit agencies' reports, demonstrated: (1) a widespread pattern of contract formation and administration problems that cannot be considered as isolated to a few activities or contracts and (2) a need for management to aggressively bring about improvement. GAO generally concluded that, without improvements, government resources cannot be adequately safeguarded against waste, loss and misuse, and the problems may continue. (p. 1 and p. 39, GAO Draft Report). [See pp. 1 and 25-26, this report.]

DoD concurs. Specific annual goals for control of contract change order activity, pursuit of A&E liability, performance of design and constructibility reviews, increased oversight of field contract offices, and training of service contract managers and contract administrators are currently a part of NAVFAC's Command Management Plan. Progress against these goals by each EFD is tracked, through automated means, measured, and published. Management resources are redirected as necessary to improve performance. NAVFAC has also sought to improve project planning through closer coordination with project sponsors and claimants, and more critical review of high tech/high risk projects at the headquarters and EFD level. A new regulation governing the planning and execution of projects funded by annual appropriations is nearing completion, and a new system to cross check audits and surveys is now in place. NAVFAC's goal is to minimize such occurrences through a combination of preventive management actions and increased oversight to spot and correct them in their incipient stages.

FINDING B: NAVFAC Doesn't Know The Scope Of Its Contracting Problems. Because of weaknesses in its management controls, GAO found that the Naval Facilities Engineering Command (NAVFAC) does not know how widespread its contracting problems might be. GAO noted that NAVFAC does not appear to have adequate procedures to evaluate the operational efficiency and economy of its Engineering Field Divisions (EFD). GAO also found that NAVFAC has not developed a formal system to catalog those problems that are identified, to

see if they are occurring NAVFAC-wide. Although NAVFAC officials advised the problems identified were isolated and additional funds for people and training would minimize their recurrence, GAO concluded application of more money, training and personnel alone may be oversimplifying the type of corrective action needed to minimize the recurrence of these problems. (p. 31 and pp. 38-39, GAO Draft Report). [See pp. 19 and 25-26, this report.]

DoD does not concur. NAVFAC is aware of the scope of its contracting problems and has focused its management resources to improve those areas. The GAO Audit Team was advised in advance of the types of problems which NAVFAC anticipated they would find during their field work. Adequate procedures are in place to evaluate the overall operational efficiency of NAVFAC's Engineering Field Divisions. A wide range of automated management reports provide information to the EFD's and Headquarters at the program, project and contract levels sufficient to manage and direct the acquisition programs, recognize adverse cost and performance trends and initiate corrective action as needed. Much of this information is also of interest to higher echelons of command and is routinely passed to higher authority within Navy, DoD, and the Congress. We acknowledge that local contract administration review by NAVFAC and its EFD's needs to be strengthened to provide more effective disclosure of local procedural weaknesses, and NAVFAC is taking action to strengthen this area within available resources. In addition, NAVFAC has, in the past year, developed and implemented new procedures within its internal review offices to better correlate and disseminate audit findings from various agencies. (See comments on Finding P.)

FINDING C: NAVFAC Components Rely Heavily On Internal Management Review And Audits. GAO found that the operational management of NAVFAC subordinates is largely decentralized and autonomous. NAVFAC components appear to rely heavily on internal management reviews and audits. GAO found, however, that although EFDs schedule management reviews as part of their internal controls, some of these reviews have not been performed as scheduled. GAO concluded that the effectiveness of the management reviews could be improved if they: (1) were expanded from a cursory examination of contract procedures and documentation to a selective test of contracting activities' key internal controls and (2) included follow-up on previously reported problems. (pp. 38-39/GAO Draft Report). [See p. 25, this report.]

DoD concurs. NAVFAC is taking steps to strengthen procurement management review procedures by establishing a dedicated staff to perform this function. (See additional comments on Findings O and P.)

FINDING D: Problems Are Of Longstanding Duration. Based on its own past work, as well as other audit agencies' work, GAO found that facilities' contracting problems are part of a longstanding pattern. GAO noted that in January 1980, it issued a report 1/, which identified deficiencies relating to inspection of contract performance, verification of contracts payment

1/ GAO Report No. PSAD-80-14, "Better Management Needed in DoD to Prevent Fraudulent and Erroneous Contract Payments and to Reduce Real Property Maintenance Costs," Dated January 9, 1984 (OSD Case No. 5294)

requests, and preaward review of bids. The GAO also cited Naval Audit Service reports in 1979 and 1981 which set out instances of excessive requirements specified in contracts, inadequate verification of payment requests, insufficient enforcement of contract terms and inadequate documentation. GAO found the same [REPEAT] problems still occurring during its recent review. (p.1 and pp. 32-34, GAO Draft Report). [See pp. 1 and 20-21, this report.]

DoD concurs. Rapid growth in service contracts as a result of OMB Circular A-76 generally outpaced the development of adequate Navy capability to administer and oversee them.

This shortcoming was acknowledged by NAVFAC at the outset of the audit. Since 1982, NAVFAC, with CNO support, has been embarked on an ambitious program of improvement in Facilities Support Contracting. For example, customer and contracting officer responsibilities have now been clearly defined in OPNAVINST 4330.1 of 24 March 1983. NAVFAC has issued clarifying policy for post award administration of maintenance service and maintenance construction contracts. Each EFD has developed implementing instructions for Facilities Support Contracts which require thorough review by the EFD of performance work statements and quality assurance (QA) plans, commitment by customers of specific quality assurance and service contract management resources, and specific letters of authority. New NAVFAC publications have been issued which provide instructions for the writing of performance work statements, surveillance of contractor performance, the development of QA plans, and the training of Quality Assurance Evaluators (QAE). Standard performance work statements and QA plans have been developed for specific functional areas such as guard service, refuse collection and disposal, buildings and structures; a total of twenty service categories have been covered to date. In order to strengthen the contract oversight and inspection processes, additional ceiling points and training have been provided. Over 1500 students have received training as Quality Assurance Evaluators at the EFDs. A new Service Contract Course is being conducted 10 times per year at the U.S. Naval School, Civil Engineer Corps Officers, Port Hueneme, California, and over 200 additional ceiling points have been provided for NAVFAC QA/Service Contract Administration. We believe that the deficiencies in contract inspection and payments cited in the GAO report will be significantly reduced by the action which NAVFAC has taken, and is continuing to take, toward improvement.

FINDING E: Contract Formation Practices: Better Planning For The Use Of Funds Could Save Money. GAO reported that the Naval Material Command requires NAVFAC to implement and assure an effective construction and maintenance program that meets the Navy's needs. GAO found evidence, however, of at least five instances in which better planning for the use of funds could have produced savings. For instance, at the National Naval Medical Center, Bethesda, Maryland, year-end-spending pressures contributed to the use of a poor roof design and replacement of the roof during the winter. As a result, water damage occurred to equipment and furnishings, and the roof likely will need earlier replacement. GAO concluded that in the case of the National Naval Medical Center roof, if the improved, less expensive design had been used and properly installed, waste and damage could have been avoided. GAO

concluded that year-end spending practices can result in defective facilities and unsatisfactory work. GAO also generally concluded that significant savings can be achieved by making improvement in planning the use of funds. (pp. 10-11, p. 38; Appendices II, IV/GAO Draft Report). [See pp. 7-8 and 25, this report.]

DoD concurs in part. A new OPNAV instruction governing the planning and use of annual funds for maintenance and repair will be issued in the near future. (See comments under Finding Q.) Although we agree that hasty year end spending can result in waste and unsatisfactory end products, the problems encountered with the roof repairs at the National Naval Medical Center were not a result of such action. The GAO report states that: (1) because of year end spending and pressures by its customer, CHESDIV opted to disregard an improved design and use one which would ultimately provide a shortened service life, (2) CHESDIV exercised poor judgment in permitting roof work to be done during winter months and (3) The Construction Office did not take action to correct noted construction deficiencies. The design of the NRMC roofs was based on valid criteria to establish positive slopes for rapid disposal of water. The roof system chosen is one recommended by a recognized authority on roofing and water proofing for use in applications such as those at Bethesda. The decision to use this system would have been the same, regardless of when the contract was awarded. Experience to date with the particular roofs, having undergone a representative winter and extremely hot summer, indicates that the system specified and installed will have life expectancy similar to alternative systems. Although more difficult, built up roof work can be successfully carried out during winter months in the Washington area. The contract specifications outline certain precautionary measures which the contractor must take to protect work in progress from the adverse effects of cold and moisture, and these specifications were generally adhered to during the course of construction. With respect to construction deficiencies, the contract provisions require the government to notify the contractor that he is responsible for damage and give him the opportunity to repair such damage or defective work at his own expense. The contractor for the Bethesda roofs was not responsive to such notice, but ultimately corrected all noted deficiencies. The contractor also reimbursed the government for water damage to furniture in the Presidential Suite.

FINDING F: Contract Formation Practices: Proper Evaluation of Needs Could Reduce Costs. GAO reported that NAVFAC is responsible for the accuracy of construction project specifications. In addition, NAVFAC is responsible for providing guidance and for reviewing public works departments' (PWDs) specifications and proposed contracts for maintenance work. On the cases it reviewed, GAO found at least fourteen instances where customers' stated needs were not properly evaluated by NAVFAC before they were placed under contract. In one of these, at the Naval Ordnance Station, Indian Head, Maryland, the facility has never worked because of design problems. In two other examples, contracts for guard services and for janitorial services specified excessive scope, at the Norfolk Naval Shipyard and at Indian Head, respectively. GAO concluded that because customers' stated needs are not properly evaluated, contracts reflect work requirements, portions of which are not needed. In addition, GAO generally concluded that significant savings can be achieved by making improvements in the determination of needs. (pp. 11-12, p. 38. p. 40; Appendices I, IV and IX/GAO Draft Report). [See pp. 8-9 and 25-26, this report.]

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DoD concurs. (See comments under Findings D and K.)

FINDING G: Contract Formation Practices: Thorough Review Of Plans And Specifications Could Prevent Additional Costs, Delay And Degraded Facilities. GAO reported that it is the responsibility of NAVFAC (or the PWDs) to assure contract plans and specifications are accurate whether they are prepared by NAVFAC or by an architect-engineering firm. The GAO found twenty examples of inadequate reviews of plans and specifications by NAVFAC or Public Works Departments. In one, the Atlantic Engineering Field Division erroneously specified black iron pipe, which is corrosible, for a hydraulic system at Naval Air Station, Oceana, Virginia. This system was to be connected to fighter aircraft. In another, the cost of installation of a fire protection pipeline at the Naval Shipyard, Long Beach, California was increased by an estimated $200,000 because drawings submitted by an Architect-Engineer were not properly reviewed and an unanticipated underground obstruction was encountered by the construction contractor. GAO generally concluded that significant savings can be achieved by making improvements in the review of plans and specifications. (pp. 12-16, p. 38; Appendices/GAO Draft Report). [See pp. 9-11 and 25, this report.]

DoD concurs. NAVFAC has recognized the need for more thorough review of plans and specification prior to contract award, and is taking positive measures to improve both design and on site constructibility reviews through the issuance of new instructions, stepped up training and, most important, seeking additional personnel resources for this labor intensive function. NAVFAC is also stepping up its pursuit of A&E liability for clearly defective designs, and recovery from A&E's is trending upwards. Proper review of A&E plans and specifications by government engineers is labor intensive. Thorough review and cross checking of one sheet of plans, for example, can take a trained professional an hour or more. A single construction contract might contain several hundred sheets of drawings. An on site constructibility review might take an engineer or construction representative a day or more in verifying field conditions represented on the drawings, site access, utilities and subsurface and surface site features. The degree to which a given contract is reviewed must be determined by assessing risk and potential costs to be avoided. Available resources are directed towards those projects with the highest potential payback in terms of avoided costs.

FINDING H: Contract Formation Practices: Better Preaward Review Of Bids And Contract Provisions Could Save Money. GAO found two significant areas where NAVFAC could save money by adhering to the procurement regulations--i.e., (1) accurate work statements, coupled with a proper review of bids to prevent the acceptance of unbalanced bids, and (2) appropriate contract terms to prevent overpricing. GAO cited as an example of the former, the Naval Air Station Pensacola, Florida, where failure to update historical work quantities or to properly review the bids on a painting contract allowed a contractor to submit an unbalanced bid. In addition, at both Philadelphia Naval Shipyard and U.S. Naval Base Guantanamo Bay, contracts were let with cost-plus-a-percentage-of-cost provisions which is prohibited by 10 USC 2306. GAO concluded that, if the historical work quantities are updated as required, the opportunity for unbalanced bidding can be avoided. Further, that if a contracting officer

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conducts preaward reviews of the bids and contract provisions unbalancing can be detected and prohibited contract provisions avoided. GAO generally concluded that significant savings can be achieved by making improvements in preaward review of bids and contract provisions. (pp. 16-19, p. 38; Appendices V, VI and IX/ GAO Draft Report). [See pp. 11-12 and 25, this report.]

DoD concurs. Final review of contract provisions before advertising and a careful analysis of bids before contract award are standard Navy practice. For construction contracts, the plans and specifications are subjected to two reviews: a technical review conducted by the various engineering disciplines involved in the proposed contract and a "constructibility" review by the field personnel who will administer the contract once it has been awarded. A new manual (NAVFAC P-446, Constructibility Reviews) was published in May 1984 to provide detailed technical guidance to field offices conducting constructibility reviews for construction contracts.

Facilities support contracts undergo similar review by functional specialists. The GAO field work was performed during a period in which significant growth in facilities support contracting occurred, primarily under the impetus of OMB Circular A-76. As noted in DOD comments on Finding J, substantial effort has been devoted since that time in developing and implementing improved, standardized statements of work, quality assurance plans, and contracting policies and procedures to enhance the effectiveness of facilities support contracting.

The cost-plus-percentage-of-cost provisions found by GAO are prohibited and should not have been used.

FINDING I: Contract Administration Practices: Enforcement Of Contract Terms And Proper Acceptance. GAO stated that while inspectors deal with contractors daily, others, such as engineers, should assure that the project is continuing as planned. In addition, GAO stated that the construction office should decide on changes to plans and specifications, correction of reported deficiencies, and final acceptance--as well as taking timely action in reported problems to protect the Government's interest. GAO found, however, at least eleven instances where contract terms were inadequately enforced or projects that should not have been, were accepted as they stood. For example, the roof of the Trident Training facility at the Naval Submarine Base, Bangor, Washington, has leaked since it was installed in 1976. The Navy accepted the work although the construction office was aware of problems six to ten months before completion. Later, two separate studies established that the contractor had performed improperly. The roof will be replaced, under a 1982 contract, at a cost of about $1 million. A second example is the acceptance of an aircraft paint facility at Naval Air Station, Jacksonville, Florida, although 24 deficiencies existed. The one-year warranty, which was never exercised, started with acceptance. After the rework activity moved in, eight months after acceptance, additional problems were found, which were corrected with activity funds. The warranty was never enforced. GAO generally concluded that significant savings can be achieved by making improvements in contract performance and project acceptance. (pp. 21-22, p. 38; Appendices I and III/GAO Draft Report). [See pp. 13-14 and 25, this report.]

DoD concurs. NAVFAC enforces the terms of the contract and accepts only that work which meets contract requirements. This is straightforward when the party responsible for the shortfall is readily determined. Unfortunately, in some cases the responsibility for the shortfall is shared among the three parties: the government, the architect-engineer who prepared the plans and specifications, and the contractor performing the work. The Trident roof problem cited by GAO was such a case. The exact mode of failure could not be determined; each of the three parties was considered liable in part for the failure, but the liability of each party could not be quantified, which made recovery impossible. Since that time, it has been confirmed that much of the problem was attributable to the specification and use of preformed urethane insulating boards beneath the roof membrane--a problem which was experienced industry-wide and which has been corrected through changes in industry and Navy specifications for use of the material. Where liability can be established, corrective action is taken. Construction contractors are routinely required to correct defective work to achieve compliance with contract requirements. In cases where it is not in the best interest of the government to require correction, a deductive credit is negotiated to recover the value not received. Cases of potential architect-engineer liability are evaluated by boards of professionals; where liability is found, action is taken to recover the costs incurred by the government as a result of the firm's error or omission. The number of such actions instituted and the dollars recovered are reported annually to the Congress for military construction projects, and both have shown an uptrend in recent years.

The audit comments concerning problems encountered in Aircraft Corrosion Control Facility, Jacksonville are correct. Less than adequate inspection and acceptance standards along with questionable warranty enforcement contributed to the operational problems and costs which this facility has experienced. It should also be noted, however, that, as in the case of the propellant disposal facility at Indian Head, and the roofs at the Trident Training Facility, Bangor, changing technology played a part.

The stringent environmental requirements associated with the application and curing of two part epoxy paints were not fully recognized and accommodated in the facility criteria and design. The result was a facility which, though useable, has never performed to expected levels. The environmental problems have also been compounded by a change in aircraft preparation and washdown procedures which was not anticipated in the original design. SOUTHDIV is presently concluding an engineering study which will serve as a benchmark for permanently correcting the problem in the Jacksonville Facility, as well as a source of information for design of future projects. Based upon lessons learned at Jacksonville, the design of a similar facility at Whiting Field, Pensacola incorporated many changes, and that facility, although not problem free, has performed at a much more acceptable level.

FINDING J: Contract Administration Practices: Recovery Of Overstated Prices Could Be More Timely. The Federal Acquisition Regulation requires that contracting officials obtain certified contractor cost or pricing data supporting proposed prices for negotiated contracts over $500,000. If audit reveals the contract price was overstated as a result of such cost data being out of date, incomplete or inaccurate, the contracting officer may request reimbursement. GAO found at least three instances where Navy had failed to follow-up with appropriate requests for reimbursement. In one example, the Atlantic Engineering Field Division awarded a contract to overhaul four cranes at the Norfolk Naval Shipyard. The audit agency reported defective pricing of $531,887. GAO estimated that about $500,000 of this is due to the contractor quoting higher prices for material when it knew lower prices were available. The Navy had made no recovery of these costs at the conclusion of the GAO review. GAO generally concluded that significant savings can be achieved by making improvement in pricing adjustments. (pp. 22-23 p. 38; Appendix IX/GAO Draft Report). [See pp. 14 and 25, this report.]

DoD concurs. As a result of ongoing Post-Award Review and DCAA audit findings, the contractor for the Norfolk Crane overhaul contract was notified on 28 November, 1983, that a deductive change order was being processed to recoup $451,949 for defective pricing. Subsequently, a unilateral change order was issued on 16 January, 1984, deducting $451,949 from the contract price.

FINDING K: Contract Administration Practices: Adequate Inspection Is Needed To Detect Poor Performance. NAVFAC and Public Works Department inspectors should assure that performance and quality match specification requirements before they certify work for payment and follow a sound inspection plan and clearly document their observations. GAO found at least 18 instances, however, where inspectors approved defective work and at least 12 cases in which they were deficient in some manner in (1) following a plan (2) adequately documenting their findings, (3) verifying the work, and/or making inspections in accordance with required schedules. An example of payment for work which did not meet specifications is Norfolk Naval Shipyard. The contractor had not met specifications for maintenance of fire hydrants and water distribution systems for eighteen months, yet was paid. Another example is the Philadelphia Naval Base where lax inspection led to payment of a contractor for defective work and use of an inferior grade of paint. At Guantanamo Bay, required maintenance and repair were not performed, inadequate work went undetected, and excessive bills were paid. The hydrants and water distribution systems at Norfolk Naval Shipyard are also illustrative of failure to recover from the contractor because of a lack of proper documentation during the inspection. At the Naval Air Development Center, Warminster, Pennsylvania, GAO found that inspection and certification for payment were weak on a janitorial services contract. GAO reported that inspections were inconsistent, inspection discrepancies were not recorded, mathematical errors were not detected, and discounts for prompt payment were lost on four invoices because they were paid late. GAO Generally concluded that significant savings can be achieved by making improvements in inspection of contractor performance. (pp. 23-26; Appendices IV, IX/GAO Draft Report). [See pp. 14-16, this report.]

DoD concurs. Most of the problems found by GAO related to facilities support contracts, which, as previously noted, had undergone significant increase in numbers under the impetus of OMB Circular A-76. We acknowledge that significant "growing pains" were occurring at the time of the GAO field work. The Naval Facilities Engineering Command had to develop doctrine, define responsibilities, develop and implement new contract language, develop quality assurance systems and new tools for enforcement by contract administrators, and recruit and train additional personnel. Much progress has been made as detailed in comments under Finding D. Three actions in particular were critically important in obtaining the improvement needed in inspection:

a. Clarification of activity responsibility for Quality Assurance (accomplished by a CNO message and a NAVFAC Instruction, both issued in November 1982).

b. Preparation of Quality Assurance Plans to guide activity inspectors and help insure comprehensive coverage of contractor activities at the necessary frequency, using valid sampling techniques. The Quality Assurance Plans were included as part of the standardized statements of work, which were developed on a centralized basis and disseminated Navy wide during 1982 and 1983. New methods of taking deductions for work not performed or for faulty work were also developed and implemented to provide better tools for enforcement.

c. Training of field personnel. (See comments under Finding D for details.)

These actions have provided a solid foundation for improved performance in facilities support contracting. NAVFAC EFD's, for example, must review each facility support contract over $100,000 before it is issued to insure that full advantage is being taken of the new techniques and the growing body of Navy-wide experience. These efforts, plus efforts to provide additional trained staff as workload grows, will continue.

FINDING L: Contract Administration Practices: Adequate Documentation Could Help Control Costs. GAO stated that Navy contract administrators should document the occurrence of inadequate performance and changes in scope to assure that equitable adjustments are made and to defend the Navy against claims. GAO found at least nine instances, however, where these matters were not adequately documented and questionable or potentially unnecessary costs were paid. For example, a new Propellant Disposal Facility at the Naval Ordnance Station, Indian Head, built at a cost of more than $10 million, has never worked. The Chesapeake Engineering Field Division approved the system, as designed by architect engineering firms, even though the design was new and untested. As problems were encountered, the construction office at the station circumvented proper contract administration by issuing over 200 verbal change orders in an attempt to salvage the facility. Later, when the Navy terminated the project for the convenience of the government, the contractor submitted a termination claim which was audited by the Defense Contract Audit Agency. Because the Navy did not have adequate documentation, it could

not properly evaluate the contractor's claim. Consequently, it paid the contractor $1.6 million, virtually all the costs claimed. On June 30, 1982, the Navy accepted an inoperable facility that had no known future uses. GAO generally concluded that significant savings can be achieved by making improvements in documentation of actions. (p. 27, p. 38; Appendices I, IV and IX/GAO Draft Report). [See pp. 17 and 25, this report.]

DoD concurs. The Propellant Disposal Facility (PDF) was initiated in an attempt to develop an environmentally sound alternative to open burning which could be operated without undue hazard to the disposal personnel. Although the processes to be employed were state-of-the-art and had not been used on a commercial or production scale, the risks were assessed as acceptable. Subsequent developments proved that assessment to have greatly understated the risks. In the final analysis, production scale implementation of these processes proved to be beyond the state-of-the-art. GAO's assessment is correct; a conventional, competitively bid, fixed price contract for construction was inappropriate. However, the requirement for significant research and development was not recognized at the time. The subsequent difficulties all flowed from the decision on the type of contract to be used, which is now recognized as having been incorrect. Oral, undefined change orders are not permitted under NAVFAC procedures. GAO is correct in stating that the lack of Navy documentation hampered evaluation of the contractor's claim. The Defense Contract Audit Agency conducted an audit to validate the contractor's actual costs incurred in pursuing the undefinitized changes and the audit results were used in settling the claim. Partly as a result of the PDF experience and in recognition of the demands posed by hospitals and other "high technology" projects which arise from time to time, NAVFAC reorganized the headquarters staff to create a group of engineers specifically charged with administration and oversight of such projects. In addition, procedures are under development for identification of "high risk" projects in order that appropriate measures may be taken to mitigate risk and monitor such projects more closely.

FINDING H: Contract Administration Practices: Verification of Payment Requests Could Prevent Overpayments. GAO reported that before paying contractor bills, it is Navy's responsibility to verify that work performed is in accordance with the contract terms. GAO discovered at least 18 cases, however, where contractors submitted bills for work in excess of that performed and for work inadequately performed or duplicate billings, which were paid. For instance, at the Naval Air Station, Oceana, Virginia, in a contract for family housing maintenance, GAO found many duplicate work authorizations and noted that payment requests were inadequately verified to ensure reductions for unsatisfactory performance. Also at Oceana, the contractor billed for and was paid for maintenance of valves which the contractor had noted were mistakenly buried and could not be maintained. GAO generally concluded that significant savings can be achieved by making improvements in payments to contractors. (pp. 28-29; p. 38, Appendices I, III and IX/GAO Draft Report). [See pp. 17-18 and 25, this report.]

DoD concurs. Comments under Finding K apply.

FINDING N: Contributing Factors: Limited Organizational Oversight By The Naval Material Command. The GAO found no evidence that the Naval Material Command (NAVMAT) evaluates the composite managerial performance of its subordinates (including NAVFAC) in terms of efficiency and economy. Although NAVMAT could gain some insight into NAVFAC's performance as a result of reports from the NAVFAC Inspector General, GAO found at the time of its visit that such reports, and particularly the last such report on file at NAVMAT, provided limited insight into NAVFAC's contracting practices. GAO's review of NAVFAC Inspector General reports showed they dealt largely with administrative not contractual matters. (GAO noted that the NAVFAC Inspector General stated that the command relies on the professionalism of its staff to evaluate contractual matters.) (pp. 30, 31/GAO Draft Report). [See pp. 19-20, this report.]

DoD concurs. The Naval Material Command has recently established an organization within the Office of the Deputy Chief of Naval Material for Contracts and Business Management (MAT 02) dedicated to contract management oversight. That organization, the Procurement Management Review Division (MAT 024), fields Procurement Management Review Teams. One of these teams conducted a command-wide organizational review of NAVFAC contracting functions from November 1983 through the Spring of 1984 and found similar shortcomings. The formal report was issued in September 1984 and is presently under discussion with the Command.

FINDING O: Contributing Factors: Examination By NAVFAC's Contracts Procedures Review Boards Are Infrequent and Cursory. GAO found that reports by the teams reviewing activities at contracting offices were infrequent and cursory. GAO also found that these reviews were (1) scheduled for an 18-month cycle; however, some locations have not been visited for more than five years, (2) primarily a cursory two to three day examination of contract procedures and contract file documentation, and (3) did not result in timely follow-up to assure corrective action had been taken. GAO further found that board members did not, as a rule, evaluate contractor performance or examine and test the adequacy of vouchering and payment systems. GAO, therefore, concluded that these examinations provided little assurance to EFDs that their contracting activities, where most of the money is spent, were exercising good stewardship. (pp. 31-32/GAO Draft Report). [See p. 20, this report.]

DoD concurs. The NAVFAC Contracting Manual Section 1 paragraph 404.4 Procurement Reviews was modified on 17 April 1984 to require more substantive analysis of the procurement responsibility:

"Procurement Management Reviews/Inspections of field office contracting activities functions shall be conducted as determined necessary by EFD commanders or OICCs but in no event less than a 24 month frequency. Factors such as the complexity and volume of business, known or anticipated problems will be considered in determining the frequency of inspections. Each EFD shall prepare for each calendar year a schedule of inspections for their subordinate activities. The schedule shall be forwarded to FAC 02 no later

than January 15th each year. In addition to forwarding individual copies of such reviews, the EFD is requested to prepare an annual summary of significant findings and conclusions regarding the offices reviewed. The annual report shall present in summary format statistical data by type, number, and dollar value of contracting actions for the offices reviewed. The report as a minimum is to address office organization, staffing, training, and pre and post contract award procedures for both formally advertised and negotiated actions".

In addition, additional ceiling and high grade points have been set aside to establish the Acquisition Improvement Branch within the Contracts Division. The function of the new branch will be to perform in depth procurement management reviews of field activities and to develop and implement information transfer and other strategies to minimize procurement problems.

FINDING P: Contributing Factor: Ineffective Use of External Audit Reports. GAO reported that for years NAVFAC's subordinates and the Navy's PWDs have been the subject of external audit groups' reports which identified problems at individual locations. GAO further found that procurement problems identified by GAO and the Navy Audit Service have tended to be repeated rather than corrected because NAVFAC did not (1) determine whether prior audit findings were isolated examples or symptomatic of a command-wide condition and (2) make more than a minimal effort to communicate the problems to other units. As an example, GAO cited the 1979 Naval Audit Service report which stated that under a Norfolk Naval Shipyard contract, the number of security personnel appeared excessive. In April 1982 GAO informed the shipyard's contracts section of this surfeit. Corrective action was not taken until 1983. Similarly the Naval Audit Service reported in 1981 that the Naval Base, Guantanamo Bay, had certified invoices for payment without proper verification, adequate contract performance, or change order negotiation. GAO's November 1982 review at this base indicated inadequate inspection on seven contracts, inadequate verification of invoices on six, and incomplete documentation of verbal change orders on one. GAO concluded that because NAVFAC did not determine whether the audit findings were isolated problems or symptomatic of a command condition, problems were repeated at the same and other units and continued to exist. (pp. 32-34; Appendix IX/GAO Draft Report). [See pp. 20-21, this report.]

DoD concurs. Prior to CY 1982 NAVFAC did not have an effective system for monitoring, analyzing, and distributing problems identified in external audit reports. However, NAVFACINST 7540.6 dated January 1982 established command policy and procedures for the distribution and cross-utilization of audit reports rendered on the operations of the Headquarters and field activities. It is the policy of NAVFAC to derive the maximum benefit from audit reports issued on command operations. Audit reports are currently distributed to all field activities, which are then responsible for ensuring that similar problems are not occurring at their activities. Internal review personnel are responsible for following up on these audit reports to ensure recommendations are implemented.

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NAVFAC has also developed a management information system to track audit reports and develop trend analysis of potential command-wide problem areas. The system is supplemented by access to both the Naval Audit Service and the DOD Inspector General data bases of audit findings.

EFDs are placing increased emphasis on monitoring contract administration functions in construction field offices and facilities support contracting functions at the various field activities, both CONUS and overseas. Internal Review personnel are assigned to Field Office Procurement Management Review Teams in order to strengthen the evaluation of internal controls and payment verification procedures. The results of these procurement management reviews of field contracting offices will be shared to transfer lessons learned throughout the NAVFAC contracting organization.

FINDING Q: Contributing Factor: Effects Of Increased Maintenance Contracting And Year-End Spending On Procurement Practices. GAO noted that there could be mitigating circumstances beyond NAVFAC's control that may have contributed to the procurement problems it [GAO] found. These involved the recent increasing volume of contracting out and year end spending. Until about five years ago, much of the naval facilities maintenance services were performed in house. Because of increased emphasis on implementing OMB Circular A-76, GAO found that maintenance contracts experienced an extensive growth. Similarly, NAVFAC finds itself caught up in year-end construction spending. GAO concluded its officials may make contract decisions contrary to sound judgment because of potential loss of available funding. (pp. 34-37/GAO Draft Report). [See pp. 22-24, this report.]

DoD concurs. GAO correctly identifies the substantial increase in facilities support contracting under the impetus of OMB Circular A-76 as a factor contributing to some of the problems noted during its field work. Significant effort has been put forth since then in order to improve the effectiveness of facilities support procedures, contract documents, quality assurance plans, and provide increased numbers of better trained staff for preparation, award and administration of facilities support contracts. (See discussion under Finding D.) With regard to year-end spending, inordinate peaking of workload at the end of the fiscal year does tend to overtax the available staff and adversely impact the effectiveness of technical and constructibility reviews of the contract documents prior to award, the advertisement and award of contracts, and the start-up of awarded contracts. However, much can be done to make the workload more manageable, while simultaneously insuring that funds available are fully utilized for essential facilities work.

NAVFAC and its engineering field divisions have been working with the Navy's "major claimants", who control the bulk of the annual funds used for facilities maintenance and repair contracts, in an effort to achieve overall improvement in the effectiveness of the Navy's facilities contracting. In brief, the concept is based on development of longer-range planning for facilities projects by the major claimants. When fully implemented, each claimant will continuously maintain and refine a facilities project program covering a span of about two years. Projects will be authorized for design well in advance of the fiscal year in which they will be awarded. This

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approach will permit completed designs to be advertised and awarded commencing at the start of the fiscal year and continuing throughout the year, which will help to reduce the peak workload now being experienced at year-end. At year-end, claimants will be encouraged to plan to have the EFD's open bids on some "extra" projects. In the event that a bid protest, design delay or other problem develops at the last minute, the claimant will then have another project available for award to productively and fully use all funds available. The project which had to be delayed can then be awarded early in the next fiscal year, after funds for the new year become available. This approach will help to ensure that any known problems are resolved prior to contract award. These concepts are being incorporated into a revision of OPNAV Instruction 11010.20 series, the Navy's basic directive governing the facilities projects program.

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RECOMMENDATIONS

RECOMMENDATION 1: Secretary of the Navy direct the Chief of the Naval Material Command and the Commander of NAVFAC to increase the effectiveness of the Contract Procedures Review Board teams by having them (1) perform the reviews as required, (2) review contract administration activities by testing the effectiveness of the contracting activities' key internal controls, and (3) follow-up on deficiencies disclosed in these reviews as well as deficiencies in other internal and external reviews. Follow-up should include recovering, as appropriate, funds improperly expended.

DoD concurs. NAVFAC has already revised its Contracting Manual to require more substantive reviews of field contract administrative procedures. In addition, NAVFAC is establishing an Acquisition Improvement Branch within the Contracts Division, whose function will be to perform in depth procurement management reviews of field activities and to develop and implement information transfer and other strategies to minimize procurement problems. The branch will be staffed and operational by the end of calendar year 1985. (See comments under Findings O and P.)

RECOMMENDATION 2: Secretary of the Navy direct the Chief of the Naval Material Command and the Commander of NAVFAC to systematically assess the results of the Contract Procedures Review Board's work as well as the findings in other audit reports to determine whether reported problems are isolated or whether they are indicators of problems that might be occurring NAVFAC-wide.

DoD concurs. Results of the Contract Review Boards will be systematically assessed for the Commander Naval Facilities Engineering Command by the Acquisition Improvement Branch within the Contracts Division, as discussed in comments on Finding O. These reports and other audit reports will be distributed for cross-utilization, with effective follow-up, as discussed in comments on Finding P.

RECOMMENDATION 3: Secretary of the Navy direct the Chief of the Naval Material Command and the Commander of NAVFAC to communicate the results of these assessments throughout NAVFAC to alert field units to conditions that may adversely affect their operations, so that corrective or preventive actions can be initiated.

DoD concurs. NAVFACENGCOM is currently distributing copies of all audit reports to field activities for implementation of recommendations. See comments under Finding P.

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