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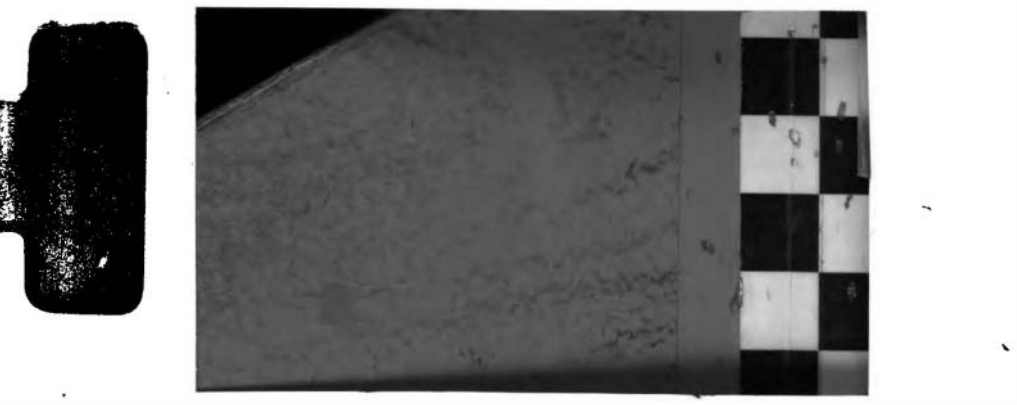

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The Experiences of Federal Agencies With Operations and Maintenance Contracts for Facilities

Federal Construction Council
Consulting Committee
on
Operations and Maintenance

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INTRODUCTION

Prompted by the need to save money and to reduce staff levels and by directives from the Office of Management and Budget mandating greater reliance on the private sector, most federal agencies have been contracting with private firms for more and more of the services required to keep their facilities operating. In 1985, the Federal Construction Council (FCC) held a symposium at which several agencies discussed their experiences with operations and maintenance (O&M) contracts. The presentations suggested that relying on the private sector for O&M services has both advantages and disadvantages.

Since the symposium, agencies have acquired more experience with O&M contracts, and the Program Committee of the FCC decided that it would be of value to the agencies to assemble and publish a summary of the policies, practices, and experiences of federal agencies with regard to contracting for O&M services. The Program Committee directed the FCC Consulting Committee on Operations and Maintenance to undertake the investigation as part of the FCC Technical Program for 1987.

HOW THE STUDY WAS CONDUCTED

To obtain the desired information, the committee developed a questionnaire which was sent to all of the agencies represented on the committee. The agencies were asked to provide information on three broad topics:

- The nature and extent of O&M contracts awarded during the past five years.

- The policies and practices of the agency in contracting for O&M services.
- The experiences of the agencies with O&M contracts.

Responses were received from all eleven agencies to which it was sent: The Department of the Air Force, Directorate of Engineering and Services; the Department of the Army, Corps of Engineers; the Department of Energy, Real Property and Facilities Management Division; the Food and Drug Administration, Facilities Management Branch; the General Services Administration, Public Buildings Service; the Indian Health Service, Office of Environmental Health and Engineering; the National Aeronautics and Space Administration, Facilities Engineering Division; the Department of the Navy, Naval Facilities Engineering Command; the National Institutes of Health, Division of Engineering Services; the U.S. Postal Service, Engineering and Technical Support Department; and the Veterans Administration, Office of Facilities.

Several of the agencies were unable to answer all of the committee's questions. They explained that they did not have very much data at the central office because their O&M activities were highly decentralized and it would have been prohibitively expensive to try to get the data from their field offices.

Similarly, the Department of Energy noted that virtually all of its field installations are managed by "operating contractors", most of which are either universities or industrial corporations. These contractors have total responsibility for the management of the field installations, including the operation and maintenance of real property facilities. In a sense, therefore, almost all of O&M at DoE facilities is performed under contract; however, DoE did not provide information on the activities of these contractors inasmuch as the maintenance of facilities is only a small part of their responsibilities. Instead DoE reported only on the O&M contracting activities of the several small installations that are managed by DoE personnel.

The General Services Administration and the U.S. Postal Service reported that they did not have O&M information on leased buildings that are operated and maintained by the owner, and that such buildings make up a large portion of their facilities inventory.

Finally, several agencies provided information on minor repair and alteration projects that are carried out with O&M funds. While repair and alteration contracts were not the subject of the study, the committee considered the information to be germane and included it in its analysis.

ORGANIZATION OF THE REPORT

The information received from the responding agencies is presented in three chapters corresponding to the three main subject areas mentioned above. The report concludes with a brief summation chapter.

NATURE AND EXTENT OF O&M CONTRACTING BY FEDERAL AGENCIES

In its questionnaire the committee asked the agencies to provide information on the percentage of O&M needs that are met through contracts, and on the number of contracts of various types awarded during the past five years. The information provided by the agencies on these subjects is summarized below.

PERCENTAGE OF O&M NEEDS MET THROUGH CONTRACTS

The extent to which agencies rely on private firms for the O&M of their facilities covers a broad range; specifically:

- The Air Force estimated that approximately 9 percent of its needs for O&M services were met through contracts in Fiscal Year 1986 (FY86). The Air Force noted that if other maintenance contracts (e.g., minor construction projects carried with O&M funds) had been included, the percentage would have been approximately 20 percent.
- The Corps of Engineers estimated that 61 percent of its O&M needs had been met through contracts in FY85; however, it noted that the percentage was different for different types of services; specifically,

custodial services--84 percent;
refuse collection--69 percent;
utilities O&M--67 percent;
building maintenance and repair--66 percent;
grounds maintenance and repair--42 percent;
pest control--38 percent;
other services--51 percent.

- The Department of Energy estimated that approximately 1 percent of its O&M needs are met through contracts. However, as noted in the Introduction, most DoE facilities are operated in toto by "operating contractors", and the facilities O&M activities of these contractors are not included in the one percent estimate.
- The Food and Drug Administration estimated that approximately 35 percent of its O&M needs are met through contracts. However, the FDA noted that this percentage includes the O&M services provided by the lessors of the numerous facilities leased by the Administration.
- The General Services Administration estimated that 40 to 50 percent of its O&M needs are met through contracts.
- The Indian Health Service estimated that the percentage of O&M services met through contracts ranged from 5 percent at some sites to 20 percent at other sites.
- The National Aeronautics and Space Administration estimated that 100 percent of its custodial, refuse collection, grounds maintenance, pest control, and road repair needs are met through contracts; and that 80 to 90 percent of its O&M needs for buildings and utilities are met through contracts.
- The Naval Facilities Engineering Command estimated that 30 to 35 percent of its O&M needs are met through contracts.
- The National Institutes of Health estimated that 50 percent of its O&M needs are met through contracts; however, it emphasized that it found it very difficult to distinguish between O&M work and repair and alteration work.
- The U.S. Postal Service estimated that less than 5 percent of its O&M needs are met through contracts.
- The Veterans Administration did not provide an estimate of the percentage of its overall needs that are met through contracts. However, it provided estimates of the percent of its O&M needs for various specific services that are met by contracts; as follows:

maintenance of elevators--90 percent;
maintenance of high voltage switchgear--90 percent;
trash removal--75 percent;
heating, ventilating and air conditioning and boiler maintenance--20 percent.

TYPES OF O&M CONTRACTS AWARDED

The committee asked the agencies to indicate the approximate number of O&M contracts of the following types awarded in the past five years:

- broad-scope contracts covering all or most of the systems and facilities at many installations or buildings in an area or region.
- broad-scope contracts covering all or most of the systems and facilities at a multi-building installation (e.g., a military base).
- broad-scope contracts covering all or most of the systems and facilities in a single building.
- narrow-scope contracts covering all systems or pieces of equipment of a particular type at a number of installations in an area or region.
- narrow-scope contracts covering all systems or pieces of equipment of a particular type at a multi-building installation.
- narrow-scope contracts covering all systems or pieces of equipment of a particular type in a single building.

Broad-Scope Contracts for An Area or Region

Only one agency, the National Aeronautics and Space Administration, indicated that it had awarded a broad-scope contract covering all or most of the systems and facilities at many installations or buildings in an area or region within the past 5 years. NASA reported that it had awarded such a contract for its world-wide tracking network; however, NASA provided no details on the type of contract awarded.

Broad-Scope Contracts for Multi-Building Installations

Six of the eleven agencies indicated that they had awarded broad-scope contracts covering all or most of the systems and facilities at a multi-building installation in the past 5 years; specifically:

- The Air Force reported that many of its overseas bases are operated and maintained under such contracts; however, the Air Force did not provide any details on the nature of these contracts.
- The Corps of Engineers reported that it had recently let 13 new contracts of this type and that it had continued or reissued eight other such contracts which had originally been awarded prior to 1982. The Corps noted that each of these contracts required the contractor to provide the necessary management, supervision, administration, data, labor, equipment, supplies, and materials to operate, maintain, and repair the real property facilities at the Army installation covered by the contract. The functional areas and services normally covered under these "umbrella" contracts are:

Dining facility equipment maintenance and repair.
Insect/rodent control.
Refuse collection and disposal.
O&M of electrical plants and systems, heating plants and systems, water plants and systems, sewage plants and systems, air-conditioning/refrigeration plants.
Maintenance and repair of buildings and structures (including family housing), improved and unimproved grounds, surfaced areas, and railroad facilities.
Custodial services.
Forestry, fish, and wild life services.

- The Indian Health Service reported that Indian tribal organizations sometimes provide complete O&M services for IHS facilities under contracts, in accordance with the provisions of Public Law-93-638.
- The Naval Facilities Engineering Command reported that it had awarded more than 10 broad-scope contracts for multi-building installations during the past 5 years. The naval bases involved ranged in size from 300-person installations to 1600-person installations. The contracts typically included O&M of facilities, utilities, mechanical equipment, and transportation equipment. The contracts have covered custodial services, refuse collection, pest control, fire protection, security, and the operation of warehouses, communication centers, and child care centers.
- The Department of Energy and the National Aeronautics and Space Administration both reported that

they had awarded broad-scope contracts for multi-building installations in the past 5 years, but they did not indicate the number or type of contracts awarded.

Broad-Scope Contracts for Single Buildings

Five of the responding agencies reported having awarded broad-scope contracts covering all or most of the systems and facilities in single buildings during the past 5 years; specifically:

- The General Services Administration reported that it had awarded approximately 20 contracts of this type.
- The Indian Health Service reported that it had awarded such contracts, but did not indicate the number.
- The National Aeronautics and Space Administration reported that it had awarded a few contracts of this type for such special purpose facilities as wind tunnels, computer complexes, and mission control centers.
- The Naval Facilities Engineering Command reported having awarded two such contracts.
- The National Institutes of Health reported that one of its facilities had been operated and maintained for several years under such a contract.

One agency, the Food and Drug Administration, reported that it plans to award its first contract of this type in 1988 for a new 235,000 square feet research facility.

Narrow-Scope Contracts for an Area or Region

Five of the responding agencies reported having awarded narrow-scope contracts covering all systems or pieces of equipment of a particular type at a number of installations in an area or region during the past 5 years; specifically:

- The Air Force reported that it had awarded an unspecified number of multi-base contracts for the maintenance and repair of commissary refrigeration systems and commissary heating, ventilating, and air-conditioning systems.

- The General Services Administration reported that it had awarded several hundred contracts of this type. The contracts cover such items as maintenance of high voltage electrical equipment and switchgear, inspection and testing of boilers and pressure vessels, calibration and adjustment of heating, cooling, and ventilation controls, inspection and maintenance of elevators, testing and treatment of water used in boilers and air-conditioning systems, maintenance of fire protection signaling and alarm systems, roof inspections, and performing such routine maintenance tasks as changing filters and relamping light fixtures.
- The Indian Health Service (IHS) reported that it had used this type of contract in the past for such services as boiler water testing, lawn care, and boiler inspections. However, because of contract administration problems, IHS now encourages individual installations to contract separately for such services.
- The Naval Facilities Engineering Command reported that it had awarded ten such contracts within the past 5 years. Among the services provided under these contracts were: grounds maintenance and maintenance of mobile utility support equipment (in Italy), refuse disposal services (in the Norfolk area), boiler inspection and service and asphalt paving (in the Norfolk area), and O&M of radar sites (in Iceland).
- The Veterans Administration reported that it has recently entered into its first contract of this type. It is for the maintenance of elevators in one medical district, which includes seven VA medical centers.
- The Postal Service has awarded many narrow-scope contracts for multiple facilities in a region. The facilities covered usually are relatively small. Among the services frequently contracted for are custodial services, lawn care, and air-conditioning maintenance.

Narrow-Scope Contracts at Multi-Building Installations

All of the responding agencies except the Department of Energy and the U.S. Postal Service indicated that they had awarded narrow-scope contracts covering all systems or pieces of equipment of a particular type at a multi-building installation.

The Air Force did not indicate how many contracts of this type it had awarded; however, it implied that there had been a substantial number covering such services as refuse collection and disposal, food service, custodial services, pest control services, energy management and control system maintenance and repair, grounds maintenance, and family housing maintenance. The Air Force indicated that contracts that exceed $25,000 annually are based on published Performance Work Statements.

The Corps of Engineers reported that it had awarded approximately five narrow-scope contracts for multi-building installations within the past five years. The Corps also reported that it had awarded approximately 20 such contracts in earlier years. Such contracts ordinarily cover such services as custodial work, refuse collection and disposal, operation and maintenance of sewage plants and systems, and certain specific tasks such as glazing or tiling.

The Food and Drug Administration (FDA) reported that it usually awards several contracts of this type each year for maintenance of heating, ventilating, and air conditioning systems, carpet maintenance, computer repair, and laboratory equipment repair. The FDA noted that most of the contracts are for less than $50,000.

The General Services Administration reported that it had awarded several hundred contracts of this type. It indicated that such contracts are awarded for maintenance of high voltage electrical systems and switchgear, inspection and test of boilers and pressure vessels, calibration and adjustment of heating, cooling, and ventilation controls, inspection and maintenance of elevators, testing and treatment of water, maintenance of fire protection signaling and alarm systems, roof inspections, changing filters, and relamping light fixtures.

The Indian Health Service reported that it had awarded an unspecified number of contracts of this type for maintenance of elevators, chillers, boilers, emergency generators, building and environmental controls, electrical safety systems, housekeeping, and landscaping. The type of contract awarded at a given facility depends on the nature and location of the facility and the availability of IHS staff.

The National Aeronautics and Space Administration reported that it had awarded an unspecified number of narrow-scope contracts for multi-building installations

for such services as changing HVAC filters, maintaining and repairing HVAC systems, repairing roofs, custodial services, refuse collection, grounds maintenance, road repairs, pest control, glazing, painting, and tile work.

The Naval Facilities Engineering Command reported that it had awarded more than 1,000 narrow-scope contracts covering all systems or pieces of equipment of a particular type of a multi-building installation. NAVFAC reported that typical contracts cover such services as refuse collection, custodial services, alarm system maintenance, maintenance of family housing, roofing repairs, interior and exterior painting, guard services, pest control services, and elevator maintenance.

The National Institutes of Health reported that it has awarded contracts for grounds maintenance, janitorial services, carpet installation, carpet maintenance, window washing, elevator maintenance and repair, automatic door repair, automatic material handling systems technical assistance, painting, repair of computerized controls, and roof repair. NIH is also considering awarding a contract for testing the lubricating oil used in the emergency diesel generator sets. NIH noted that many O&M services are handled partly by government personnel and partly through O&M contracts. However, the trend is to reduce in-house staff and rely more on contractors. NIH also noted that dividing responsibility for services can create jurisdictional problems unless the responsibilities of government employees and contractors are clearly defined. Such jurisdictional problems occurred in the past with elevator maintenance and repair, but these problems have been resolved by making government employees responsible for all routine maintenance and the private contractor responsible for major repairs and some preventive maintenance work.

The Veterans Administration reported that it had awarded an unspecified number of narrow-scope contracts for inspection and follow up repairs of elevators, high voltage switchgear, trash removal, HVAC systems, and boilers on multi-building installations.

Narrow-Scope Contracts for Single Buildings

Four of the responding agencies--the Air Force, the Corps of Engineers, the National Aeronautics and Space

Administration, and the National Institutes of Health--either indicated or implied that they had not awarded any narrow-scope contracts covering all systems or pieces of equipment of a particular type in a single building within the past five years. Two other agencies--the Department of Energy and the Indian Health Service--stated or implied that they had let such contracts, but they provided no information on the contracts. Five agencies provided information; specifically:

- The Food and Drug Administration reported that it ordinarily awards several contracts of this type annually to cover the repair of glass, cages, and rack-washing equipment, and for the maintenance and repair of such laboratory equipment as fume hoods and stills.
- The General Services Administration reported that it had awarded several thousand narrow-scope contracts for single buildings and that the contracts covered generally the same services as the contracts awarded for multi-building installations.
- The Naval Facilities Engineering Command reported that it had awarded more than 500 narrow-scope contracts covering all systems or pieces of equipment of a particular type in a single building within the past five years. NAVFAC indicated that the types of services provided under such contracts were the same as for multi-building installations. NAVFAC also indicated that many of the contracts were for Naval Reserve Centers.
- The U.S. Postal Service reported that they had issued numerous contracts for cleaning USPS buildings. They indicated that additional contracts have been awarded for maintenance of elevators, boilers, snow removal, lawn mowing, rodent control, window washing, and radio repair.
- The Veterans Administration indicated that it had awarded an unspecified number of narrow-scope contracts for single buildings for essentially the same services as contracts for multi-building installations.

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POLICIES AND PRACTICES OF AGENCIES IN CONTRACTING FOR O&M SERVICES

The responding agencies were asked to discuss nine issues relating to their policies and practices in contracting for O&M services:

- Types of contracts used in various situations.
- The use of incentive clauses in contracts.
- The nature and extent of administrative oversight, supervision, and inspection of O&M contractors by government personnel.
- Organizational elements responsible for developing, awarding, and managing O&M contracts.
- Criteria used to decide whether to contract for O&M services in various situations.
- How the cost of agency supervision and inspection of O&M contractors are estimated and provided for in budgets.
- How the estimated cost of a proposed O&M contract is determined.
- How O&M contractors are selected.
- How performance standards and levels of quality for O&M work are established.

The information provided by the agencies on the issues is discussed below.

TYPES OF CONTRACTS USED IN VARIOUS SITUATIONS

Two agencies, the Department of Energy and the Veterans Administration did not provide any information on the types of contracts they have used for O&M services. The other agencies reported that they use a

variety of contracts; however, all reported using lump-sum, fixed-price contracts frequently if not most of the time. Most agencies seem to subscribe to the views expressed by the Naval Facilities Engineering Command that such contracts are used whenever the quantity, time, and place of delivery of all services are known, and when the services to be provided are of a repetitive nature. The policies and practices of these agencies regarding other forms of contracts are as follows:

- The Corps of Engineers indicated that for broad-scope services covering all or most of the systems and facilities at a multi-building installation, the Office of the Chief of Engineers recommends the use of a special contract form that is a composite of three contractual arrangements--lump-sum fixed-price contracts, fixed-unit-price contracts, and cost reimburseable contracts. The Corps also noted, however, that local contracting officers are free to select the type of contract they wish to use, and they most often use fixed-price or cost-plus-award-fee contracts for broad-scope services.
- The Food and Drug Administration reported that it uses several different types of contracts in addition to the fixed-price contracts, but especially undefined quantity contracts and various cost-plus contracts.
- Among the types of contracts used by the General Services Administration are the indefinite delivery contract, the definite-quantity-and-requirements contract, and time-and-material contracts. The GSA indicated that these types of contracts are ordinarily used when the extent, duration, and cost of the work cannot be reasonably determined beforehand.
- Among the types of contracts used by the National Aeronautics and Space Administration are cost-plus-award-fees contracts, time-and-material contracts, task-order contracts (with unit prices), and fixed-price contracts (with unit costs). NASA noted that most broad-scope services are procurred with cost-plus-award-fee contracts.
- The Naval Facilities Engineering Command reported that it used indefinite quantity contracts when the quantity of services and/or the time and place of the delivery of the services are unknown; combination fixed-price and indefinite quantity contracts are used when some but not all of the services have known

quantities, delivery times, and places; fixed-price-plus-award-fee contracts are used when the services to be provided are extensive and complex and when the quality of services directly affect the mission of the installation or the quality of the life of its employees; and fixed-price plus incentive-fee contracts when the contractor is selected on the basis of factors other than price and/or there is a need to conduct discussions with potential contractors. The Navy noted that the incentive fee in such contracts is fixed.

- The National Institutes of Health reported that it uses indefinite delivery and indefinite quantity contracts in addition to lump-sum fixed-price contracts.

THE USE OF INCENTIVE CLAUSES IN CONTRACTS

Five agencies reported that they seldom, if ever use incentive clauses: the Indian Health Service, the National Institutes of Health, Naval Facilities Engineering Command, the U.S. Postal Service, and the Veterans Administration.

Six agencies reported significant usage of incentive clauses: the Air Force, the Corps of Engineers, the Department of Energy, the Food and Drug Administration, the General Services Administration, and the National Aeronautics and Space Administration. However, of these, only NASA provided detailed information on how it uses incentive clauses.

NASA reported that one type of incentive used in its contracts is the award fee in cost-plus-award-fee contracts. With such contracts, NASA establishes a special board to review the contractors performance to determine if it qualifies for the award fee. NASA reported that some of its installations use another type of incentive in custodial contracts. With this arrangement NASA develops a "performance evaluation plan" (PEP) that is not part of the bid package. NASA also invites the contractor to make recommendations for performance incentives, which may or may not be incorporated in the PEP, at NASA's discretion. The PEP stipulates the value of the incentive that the contractor can earn. It is usually expressed as a percentage of the base contract amount. Neither the PEP nor the incentive amount are negotiable. However, the contractor may suggest additional work in order to claim more of the incentive

money. A "performance evaluation board" is established and meets two or three times each year to determine if the contractor has earned any of the incentive money. The evaluation is based on reports from the technical monitor and inspection of the work performed.

NATURE AND EXTENT OF ADMINISTRATIVE OVERSIGHT, SUPERVISION, AND INSPECTION OF O&M CONTRACTORS

The non-military agencies gave very brief and general responses to the committee's question regarding the nature and extent of administrative oversight, supervision, and inspection of O&M contractors by government personnel. The General Services Administration, for example, indicated merely that it had detailed procedures that are similar to those of the military agencies. The other civilian agencies apparently do not have detailed procedures for administering O&M contracts. Nevertheless, some interesting comments were included in the responses of the civilian agencies; for example:

- The Department of Energy reported that it monitors the work of O&M contractors very closely, almost on a day-to-day basis. Most of the other agencies that addressed the subject all indicated or implied that they do not monitor O&M contractors closely.
- The Food and Drug Administration and the Indian Health Service reported that inspection of O&M contractors has been a serious problem because of the shortage of qualified inspectors.
- The National Institutes of Health reported that it had found it necessary to put more resources into O&M inspection.
- The U.S. Postal Service reported that its O&M contractors are inspected by local maintenance or administrative staff personnel on behalf of the responsible contracting officer.

The three military agencies have fairly detailed procedures for administering O&M contracts, all of which seem to be similar. The Corps of Engineers for example, described its policies and procedures as follows:

> There is no direct supervision of contractors by government personnel. The

contractor's performance is normally monitored by a functional contracting officer representative, quality assurance evaluators (inspectors), and a centralized contract administration activity using a contract administrators plan. The centralized contract administration activity may include a contracting officer, a contract administrator, a cost and price analyst, and a property administrator. The contractor's performance is monitored using standard surveillance techniques such as random sampling, checklist and customer feedback, according to a quality assurance surveillance plan. The contractor is also monitored by government personnel. A periodic evaluation of the contractor's business management, including some contracting procedures, is normal. In the case of cost-plus-award-fee contracts, quarterly reports of the contractor's performance are provided to an award review board, which advises the Award Fee Determining Official on the appropriate award fee for the contractor's performance.

ORGANIZATIONAL ELEMENTS RESPONSIBLE FOR DEVELOPING, AWARDING, AND MANAGING O&M CONTRACTS

Almost all of the agencies use the same basic approach in assigning responsibility for developing, awarding, and managing O&M contracts; specifically, responsibility is divided between a procurement office and a technical office. The procurement office--which is referred to variously as the Division of Procurement, the Procurement and Supplies Department, the Contracting Office, the Division of Contracts and Grants, and the Supply Service--has primary responsibility for the procurement and is responsible for making the award. The technical office--known variously as the Functional Manager, the Director of Engineering and Housing, the Base Civil Engineer, the Facilities Management Branch, the Facilities Engineer, the Facilities Management Department, and the Engineering Service--is typically

responsible for developing statements of work and/or technical requirements and for inspecting the work of the contractor.

Only two agencies reported any significant deviation from this general organizational pattern. The Department of Energy indicated that its procurement office is totally responsible for all aspects of the procurement, and the General Services Administration reported that its facilities management organization is authorized to award small O&M contracts on its own (up to the warrented contracting authority level of the building manager) without going through the contracting office. The maximum dollar amount of contracts that can be handled in this manner was not indicated.

CRITERIA USED TO DECIDE WHETHER TO CONTRACT FOR O&M SERVICES IN VARIOUS SITUATIONS

The responding agencies mentioned a number of different factors that they considered in deciding whether to contract for O&M services. All but two agencies--the Department of Energy and the National Aeronautics and Space Administration--said that the availability of in-house staff was a primary factor. The Postal Service emphasized that it was usually motivated by a lack of people with special skills, rather than a shortage of people in general. Other agencies indicated that they were concerned about both the number and skills of in-house personnel.

Interestingly, only five of the responding agencies said that analyses performed in accordance with Office of Management and Budget Circular A-76 were a major factor in determining whether or not to contract for O&M services. However, four other agencies indicated that cost was a primary factor, and since A-76 evaluations are essentially cost analyses, it is likely that these agencies were actually referring to A-76 analyses. With regard to A-76, the Air Force noted that it was not a factor if a function is deemed to be militarily essential. The Corps of Engineers noted that if an activity is being performed by more than 45 government employees it cannot be contracted out unless it is deemed cost effective under the rules of A-76.

Five agencies--the Air Force, the Corps of Engineers, the Food and Drug Administration, the Naval Facilities

Engineering Command, and the National Institutes of Health--identified user need as a factor in determining whether to contract for O&M services.

Only one agency, the Air Force, identified the availability of funds as being a major consideration in the decision to award an O&M contract; however, it seems likely that this is also a factor with the other agencies.

The Naval Facilities Engineering Command mentioned two factors that no other agencies mentioned; namely, the availability of contract administration and inspection personnel and the time and effort needed to develop contract specifications. It is not known if other agencies also considered these factors.

ESTIMATING AND BUDGETING FOR THE COST OF AGENCY ADMINISTRATION AND INSPECTION OF O&M CONTRACTS

One agency, the Department of Energy, indicated that it did not know how its cost of administering and inspecting O&M contracts is estimated or provided for in budgets. All of the other responding agencies indicated or implied that they generally use in-house personnel to administer and inspect O&M contracts and that such personnel are paid for out of agency operating budgets or overhead. However, the National Institutes of Health indicated that user organizations are billed for the cost of administering and inspecting construction projects, and the National Aeronautics and Space Administration indicated that on contractor-operated facilities the prime contractor is responsible for overseeing O&M work performed under subcontracts.

Most of the agencies did not discuss how the cost of the administration and inspection of O&M contracts is estimated. Four agencies--the Air Force, the Corps of Engineers, the General Services Administration, and the Naval Facililties Engineering Command--indicated that the cost of contract administration and inspection is estimated as part of an A-76 analysis; however, only the General Services Administration indicated definitely that the estimates developed for such analyses are used for budgeting and accounting purposes. It is not clear whether the other agencies use the estimates for such purposes. The Naval Facilities Engineering Command implied that the estimates are not used.

GSA indicated that it sometimes estimates the cost of administration and inspection at 8 to 10 percent of the total cost of the contract. The Naval Facilities Engineering Command on the other hand, reported that it develops a quality assurance staffing plan for each contract, which is based on published guidance: OPNAVINST 4860.7B.

ESTIMATING THE COST OF O&M CONTRACTS

One agency, the Department of Energy, did not indicate how it estimated the cost of a proposed O&M contract. Of the other agencies, the General Services Administration indicated that its estimates were based on historical information plus ad hoc analyses of the man hours, materials, and supplies required for the work to be done. The U.S. Postal Service and the Veterans Administration indicated that they relied primarily on historical cost data when developing estimates. The other agencies reported using a variety of sources of cost data. Most reported relying on historical information (either their own or the experiences of other agencies), published estimating guides (e.g., The R. S. Means guide), and ad hoc analyses of the work to be performed. Three agencies--the Corps of Engineers, the Naval Facilities Engineering Command, and the National Institutes of Health--reported using "Engineered Performance Standards." One agency, the National Aeronautics and Space Administration, reported that it has sometimes used consultants to help develop estimates. The Naval Facilities Engineering Command indicated that it has sometimes conducted market surveys when preparing estimates.

HOW O&M CONTRACTORS ARE SELECTED

One of the agencies--the Department of Energy--did not provide any details on how they select O&M contractors. Of the other nine responding agencies, four--the General Services Administration, the Indian Health Service, the National Institutes of Health, and the Veterans Administration--reported that they award all or most of their O&M contracts to small or minority-owned businesses under set-aside programs. The Indian Health

Service explained that most of its O&M contracts go to firms owned by Indians. Five other agencies also reported that they sometimes award O&M contracts to small businesses: the Air Force, the Corps of Engineers, the National Aeronautics and Space Administration, the Naval Facilities Engineering Command, and the U.S. Postal Service. Most agencies that award O&M contracts to small businesses indicated or implied that such awards were made in accordance with procedures established by the Small Business Administration.

Most of the agencies indicated that O&M contracts that are not awarded under a set-aside program for small or minority owned businesses are awarded to the lowest responsive and responsible bidder.

Most agencies reported that they sometimes base awards on proposals submitted by the contractors when the qualifications and organizations of the contractor are more important considerations than price. The Naval Facilities Engineering Command also indicated that, by international agreements, O&M contractors in some foreign countries are selected by the host country.

HOW PERFORMANCE STANDARDS FOR O&M WORK ARE ESTABLISHED

The U.S. Postal Service and the Veterans Administration did not provide any information on how they develop performance standards and/or levels of quality for O&M work. The other nine agencies mentioned a variety of sources of information used in developing performance standards, as follows:

- Seven agencies reported that their performance standards are based on what is perceived to be the level of quality that is ordinarily achieved in the private sector.
- Five agencies indicated that they rely on a variety of published government and non-government standards.
- Four agencies indicated that their standards reflect the needs or desires of the using activity.
- Three agencies reported that their standards are based on the level of quality achieved when government personnel performed the work.

- Three agencies reported that they rely heavily on their experience with previous contracts for the same service (i.e., they adjust specifications for new contracts to avoid quality and performance problems experienced with current or past contracts for the same service).
- Two agencies reported that they consider the recommendations of the manufacturers of the items being maintained when developing performance or quality standards.

Three agencies indicated that they had developed model criteria to be used by field organizations in preparing specifications for certain O&M contracts. The Air Force and the Naval Facilities Engineering Command referred to their model criteria as "performance work statements." The Veterans Administration indicated that it had developed an "A-76 bid package." The other agencies indicated or implied that their O&M contract specifications were developed on an ad hoc basis.

EXPERIENCES OF AGENCIES WITH O&M CONTRACTS

Agencies were asked to discuss seven topics relating to their experiences with O&M contracts:

- Whether contracting for O&M services had saved money in comparison to having O&M work performed by government personnel.
- Whether private O&M contractors had given better or worse service than government O&M organizations.
- Whether performance work statements have been used.
- The main reasons O&M contracts had been awarded.
- What has been the cost of administering various types of O&M contracts.
- What has been the experience with "job order contracts."
- What had been the main reasons some contracts have been successful and some contracts had been unsuccessful.

The information provided by the agencies on these topics is summarized below. No information is included from the Department of Energy inasmuch as that department indicated that it had no historical data on the subject.

IS MONEY SAVED THROUGH O&M CONTRACTING?

In response to the committee's question about whether money had been saved through O&M contracts, five agencies noted that a portion of their O&M contracts are awarded as a result of A-76 analyses, and that such contracts are not awarded unless the low bids are less than the estimated cost of continuing to use government employees to perform the service in question.

Consequently, by definition these O&M contracts save money. The Air Force indicated, for example, that the low bid for the contract must be at least 10 percent below the estimated cost of having the work done in-house. The Corps of Engineers noted, however, that O&M contracts frequently run for three years and that the contracts are often modified in the second and third year to reflect changing needs and experience gained during the first year. Since these modifications can affect costs, the full extent of anticipated savings may not be realized in some cases. However, the Corps of Engineers indicated that it did not have any hard data on the subject.

Most of the agencies noted that many of their O&M contracts were not issued primarily to save money but rather because of a shortage of government personnel with needed skills. Most of the agencies did not have data to indicate whether money was being saved on such contracts, or if so, the amount of money being saved. The Food and Drug Administration for example suggested that the full amount of savings indicated by analyses probably were not being realized in practice because of the hidden costs associated with contracting out. The Indian Health Service, on the other hand, was confident that it was realizing significant savings by contracting for highly technical services even though the cost of such services was high. IHS determined that the cost of keeping full time personnel with such skills on the payroll would have been much higher. Similarly, the U.S. Postal Service estimated that contracting for custodial services saved money. However, the National Institutes of Health expressed the view that in general contracting for O&M services had not saved money for three reasons: The relatively high cost of contracts awarded under the set-aside program; the relatively small size of their contracts; and the fact that private sector salaries in the Washington, DC area are relatively high.

The only agency that was able to provide data on the amount of savings realized through contracting for O&M services was the Naval Facilities Engineering Command (NAVFAC). NAVFAC reported the gross savings, expenses, and net pay back from contracts awarded on the basis of A-76 analyses for Fiscal Years 1979 through 1985. The NAVFAC data showed that for the seven year period gross savings totalled $430.8 million, program expenses amounted to $84.1 million, giving a total net pay back of

$346.7 million, for an average annual net savings of almost $50 million.

DO PRIVATE O&M CONTRACTORS GIVE BETTER SERVICE THAN GOVERNMENT O&M ORGANIZATIONS

Three agencies--the Food and Drug Administration, the Indian Health Service, and the National Institutes of Health--did not respond directly to the committee's question as to whether private O&M contractors had given better or worse service than government O&M organizations. The Food and Drug Administration noted that the performance of O&M contractors tends to vary over the life of the contract, with lowest performance occurring during the start up and close out periods. The Indian Health Service noted merely that each contractor is evaluated both during the course of the contract and after the contract has been completed, and that unsatisfactory performance will cause a contractor to be disqualified from bidding on future contracts or, if performance is very bad, cause a contract to be terminated before it is completed. The National Institutes of Health reported that no formal evaluations of O&M contractors have been made but that their subjective view was that some contractors had been good and some contractors have not been good.

Of the other seven agencies, three--the Air Force, the Corps of Engineers, and the National Aeronautics and Space Administration--expressed the view that on average O&M contractors had given equal or better service than the government organizations they replaced. Both the Air Force and the National Aeronautics and Space Administration noted that private organizations seem to be able to adjust their work forces more quickly than government organizations to accommodate changing situations. Three agencies--the General Services Administration, the Naval Facilities Engineering Command, and the U.S. Postal Service--reported that private contractors had given service that was approximately equal to that provided by government organizations. Only one agency, the Veterans Administration, thought that O&M contractors had given worse service than government organizations. The Veterans Administration indicated that it had found private contractors to be less responsive and less thorough than government organizations.

All of the agencies indicated that their views on the performance of contractors were based mostly on subjective evaluations.

THE USE OF PERFORMANCE WORK STATEMENTS

Three agencies--the General Services Administration, the Indian Health Service, and the Veterans Administration--reported that they had seldom if ever used performance work statements. (GSA noted that their current work statements are frequently referred to as "performance work statements" even though they are primarily prescriptive in nature). The General Services Administration and the Veterans Administration both indicated that they expected to use such statements in the near future.

The other seven agencies all indicated that they had used performance work statements for several years. However, two of these agencies--the Food and Drug Administration and the National Institutes of Health--indicated that they used them only for service contracts. In addition, the National Aeronautics and Space Administration expressed the belief that performance work statements are better suited to narrow-scope contracts.

The Corps of Engineers and the Naval Facilities Engineering Command both reported that they have had model or guide performance work statements for a number of tasks (twenty in the case of NAVFAC) for several years, and that the statements have been widely used by their field offices. However, both agencies also reported that the statements are very difficult to write and that they must be modified for use with each individual contract, frequently with the addition of prescriptive requirements.

WHY O&M CONTRACTS HAVE BEEN AWARDED

In response to the committee's question as to why agencies had awarded O&M contracts, a number of reasons were cited. Saving money was a primary motivation for all agencies except the Indian Health Service and the U.S. Postal Service. All agencies but two--the Air Force and the U.S. Postal Service--reported that personnel ceilings were another important reason. Similarly, all

but three agencies--the Food and Drug Administration, the National Institutes of Health, and the Veterans Administration--listed shortages of personnel with required skills as one of the main reasons for awarding O&M contracts.

Four agencies reported that one of the main reasons for awarding O&M contracts was that they were required to do so in some circumstances. Of these, three agencies--the Corps of Engineers, the General Services Administration, and the National Aeronautics and Space Administration--indicated that Office of Management and Budget Circular A-76 provided the motivation. However, it is believed that other agencies were motivated by A-76 but just neglected to mention it. The Naval Facilities Engineering Command reported that it was sometimes required to award O&M contracts in foreign countries because of international agreements.

Only one agency, the National Aeronautics and Space Administration, indicated that a desire to obtain better service was one of the main reasons for awarding O&M contracts.

The Air Force mentioned two reasons that no other agency mentioned: As a means of obligating year-end funds, and in order to meet an urgent need that could not be met by government personnel.

THE COST OF ADMINISTERING O&M CONTRACTS

All of the agencies reported that they did not keep an accounting of the cost of administering O&M contracts, and only four agencies were willing to offer an estimate. The Air Force indicated that the administrative cost on lump-sum fixed-price contracts was between 6 and 8 percent of the contract amount, and the administrative cost of service contracts was between 2 and 4 percent of the contract amount. The Indian Health Service estimated that administrative costs ran between 5 and 20 percent of the contract amount. The National Aeronautics and Space Administration estimated that the administrative cost of fixed-price contracts was 2 to 4 percent of the contract amount, and the administrative cost of cost-plus-award-fee contracts amounted to 4 to 6 percent of the contract amount. Finally, the Naval Facilities Engineering Command estimated the administrative cost at 4 to 14 percent of the contract amount, with the smaller

percentage being typical on large contracts and the larger percentage being found with smaller contracts.

THE EXPERIENCES OF AGENCIES WITH "JOB ORDER CONTRACTS"*

Six of the agencies either indicated that they had never used job order contracts, or they did not respond to the committee's question on the subject. In addition, the three military agencies indicated that their experience with such contracts was too limited to permit them to discuss the subject. Only two agencies reported significant experience with job order contracts. The General Services Administration indicated it had used such contracts extensively to procure services for minor repair work, preventive maintenance work, and routine alteration work. GSA reported that the contracts have been useful because they eliminate the job of selecting a new contractor each time a task covered by the blanket contract needs to be carried out. This saves a substantial amount of administrative time and gets the work done quicker than would be the case otherwise. The National Aeronautics and Space Administration also reported that it had made extensive use of such contracts. NASA indicated that its experience with the contracts ranged from good to bad.

WHY O&M CONTRACTS ARE SUCCESSFUL OR UNSUCCESSFUL

Although the committee asked the agencies to discuss why O&M contracts are sometimes unsuccessful as well as why they are successful, most agencies discussed only the factors that contribute to a successful contract. Several of the agencies explained that the main factor

*Job order contracts are indefinite quantity contracts, which are defined in the Federal Acquisition Regulations as contracts that provide for an indefinite quantity, within stated limits, of specific supplies or services to be furnished during a fixed period of time, with deliveries to be scheduled by placing orders with the contractor.

contributing to problems is failure to properly carry out the actions that contribute to success.

Almost all of the agencies mentioned three factors as being the keys to a successful project:

- Having a good, precise, clear statement of work.
- Having a good contract administration plan, and particularly a good quality assurance plan.
- Having a good contractor.

With regard to the last item, the Indian Health Service emphasized the importance of checking the credentials of prospective contractors before making an award. The National Aeronautics and Space Administration observed that the inclusion of incentive clauses in O&M contracts tends to attract good contractors.

Three agencies--the Air Force, the Corps of Engineers, and the National Aeronautics and Space Administration--emphasized the importance of insuring that there is mutual agreement between the contractor and the agency about the nature of the work to be performed. The Corps of Engineers indicated that pre-award conferences with the contractor are useful in this regard.

The Air Force and the Corps of Engineers also suggested that it is important to coordinate the project with various affected organizations at the facility where the work is to be carried out; e.g., the occupants of the facility, the manager of the facility, and the contracting officer.

The Naval Facilities Engineering Command indicated that having good contract documentation contributes to a successful project.

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SUMMATION

The survey revealed wide differences in the extent to which agencies rely on contracting for facilities O&M. The percentage of O&M needs that are met through contracting ranges from 5 percent or less for three agencies to 50 percent or more for four agencies. The data provided by the agencies do not permit an average percentage for the government as a whole to be calculated; however, the committee's educated guess is that between 30 and 40 percent of the government's facilities O&M needs are being met through contracts. The results of the survey substantiated the assumption that was made before the study was undertaken that federal agencies are relying heavily on private contractors for O&M services.

The survey indicated that collectively federal agencies are procuring the whole spectrum of O&M services, but that there is somewhat greater interest in services at the high and low ends of the skills spectrum; i.e., custodial services and high technology services.

All but two of the agencies have awarded at least one broad-scope O&M contract; i.e., a contract covering all or most of the O&M work for all or most of the systems and facilities in a building or group of buildings. However, only four agencies--the Corps of Engineers, the General Services Administration, the Naval Facilities Engineering Command, and the National Aeronautics and Space Administration--reported extensive use of such contracts. On the other hand, all agencies have had experience--and in most cases considerable experience--with narrow-scope contracts; i.e., contracts for a particular type of O&M service in a single building or in a group of buildings. The list of services for which

various agencies have let narrow-scope O&M contracts includes more than 30 items, with the following items being mentioned most often: Service and repair of high voltage electrical equipment, inspection and repair of boilers, maintenance of heating, ventilating, and air-conditioning systems (including controls), maintenance of elevators, lawn care and/or landscaping, refuse collection and disposal, custodial services, and pest control services.

Most federal O&M contracts are of the firm fixed-price type. However, agencies also have used a very wide variety of other types of contracts to procure O&M services; e.g., cost-plus-award-fee, indefinite quantity, indefinite delivery, time and material, task order (with unit prices), fixed-price plus award fee, and fixed-price plus incentive fee. In addition, two agencies, the Corps of Engineers and the Naval Facilities Engineering Command, have developed special O&M contracts for broad-scope procurements that are composites of several standard forms of contract.

Six of the responding agencies have included an incentive clause of some type in their O&M contracts. The National Aeronautics and Space Administration seems to have made greatest use of such clauses.

The military agencies have developed procedures that outline in detail the duties and responsibilities of the various government personnel involved in O&M contracting. The non-military agencies, on the other hand, apparently have not developed or have not published detailed standard procedures for administering O&M contracts.

Almost all of the agencies divide responsibility for the procurement of O&M services between a procurement office, which is responsible for insuring that the procurement is handled in accordance with applicable laws and regulations, and a technical office, which is responsible for developing statements of work and technical requirements and for inspecting the work of the contractor.

Most agencies base decisions on whether to contract for O&M services primarily on two criteria: The availability of in-house staff to perform the required services and cost--either in general or as determined on the basis on an A-76 analysis.

Only one agency indicated that obtaining better service was a prime consideration. However, it is probably an important factor with many agencies.

Most of the agencies consider the cost of administering O&M contracts to be an overhead expense, and they do not estimate or budget for such work separately from other administration expenses. While the cost of contract administration is calculated as part of an A-76 analysis, such estimates are essentially hypothetical. In fact, none of the agencies keep records on the cost of administering O&M contracts, and only four agencies were willing to offer an estimate of such costs. The estimates, expressed as a percent range of the total contract amount, ranged from a low of 2 to 4 percent to a high of 5 to 20 percent.

Most agencies base estimates of the cost of O&M work on their own historical information, published estimating guides (e.g., "Means" and "Engineered Performance Standards"), and ad hoc analyses of work to be performed.

Almost all of the agencies award at least a portion of their O&M contracts to small or minority owned businesses under set-aside programs, and most of such awards are made in accordance with procedures established by the Small Business Administration. Most other O&M contracts are awarded to the lowest responsive and responsible bidder. However, some agencies also consider the qualifications of the contractors in making awards.

Agencies base their performance standards for O&M work on a variety of factors; e.g., the quality of work ordinarily achieved in the private sector; published standards; the needs of the using activity; the level of quality achieved when government personnel performed the work; the level of quality achieved under previous contracts; and the recommendations of the manufacturers of items being maintained.

Most agencies do not have (or did not provide) data on the amount of money saved through O&M contracts. Indeed, only the Naval Facilities Engineering Command provided hard statistics; the Navy reported it had saved $346.7 million on contracts awarded on the basis of A-76 analyses (a large percentage of which were not for facilities O&M services) over the seven-year period 1979 through 1985. Five other agencies assume that money has been saved because their O&M contracts are awarded on the basis of economic analyses. The remaining agencies enter into O&M contracts primarily because of personnel shortages, and most are skeptical that such contracts have saved money.

Most of the agencies believe that O&M contractors generally have given equal or better service than the government organizations they replaced. Only one agency thought that O&M contractors generally had given worse service than comparable government organizations. (Four agencies did not express an opinion on the subject of the quality of O&M service provided by private contractors.)

All but three agencies have used performance work statements, and two of the agencies that have not used them in the past plan to start using them in the near future. Of the agencies that have used performance work statements, most use them only for certain types of contracts (e.g., service contracts). The Army and the Navy have developed model or guide performance work statements for a number of tasks.

Only two agencies have used job order contracts regularly. One of those agencies found such contracts generally to be useful; the other agency has had mixed results.

The agencies were in general agreement that three factors contribute most to successful O&M contracts: Having a good, precise, clear statement of work; having a good contract administration plan, and particularly a good quality assurance plan; and having a good contractor.