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

ACCOUNTING AND FINANCIAL
MANAGEMENT DIVISION

B-207031   JULY 21, 1983

The Honorable Caspar W. Weinberger
The Secretary of Defense

    Attention: Office of GAO Report Analysis

Dear Mr. Secretary:

    Subject: Army Can Benefit From Lessons Learned in
               Developing a New Facilities Management
               Information System (GAO/AFMD-83-85)

    We have recently completed our review of the Army's automated
facilities engineer management information system known as the In-
tegrated Facilities System (IFS). Because the system is being re-
designed, we are not making recommendations now. However, we would
like to share with you our observations which we believe will be
beneficial in the redesign effort.

    The system has not fulfilled one of the Army's major goals of
providing timely and accurate Departmentwide data on Army real
property facilities, including the backlog of maintenance and re-
pairs. The system was intended to be used by (1) installation man-
agers for conducting facilities engineering operations and (2) the
Department of the Army for compiling real property facilities in-
formation for its own use and for reporting to the Congress.

    As you know, we issued a report to the Congress last year en-
titled "Improvements Needed in Operating and Using the Army Auto-
mated Facilities Engineer Cost Accounting System" (GAO/AFMD-82-27,
May 19, 1982). The cost accounting system is an integral part of
IFS. In our report, we said that the cost accounting system was
not effective because

    --the information it generated was not used by installation
      managers,

    --data were not being entered accurately or promptly, and

    --the system contained design deficiencies.

    In response to our report, the Army agreed that the design,
operation, and use of the cost accounting system needed improve-
ment. To better meet the needs of the system users, and in con-
junction with the procurement of new automated data processing

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equipment, the Army is completely redesigning IFS. We believe the information in our earlier report will be valuable to the Army in devising an improved overall IFS for use by installation managers.

Regarding use of the system by the Department of the Army to compile real property facilities information for its own use and for reporting to the Congress, IFS has not provided this capability primarily because

--installations have not inspected facilities as required to determine their condition and the estimated cost to correct deficiencies, and

--the system has not been implemented at all sites.

In addition to redesigning the current system, the Army needs to carefully consider the major problems encountered over the last 16 years in its efforts to develop, implement, operate, and utilize IFS to make sure these problems are addressed.

OBJECTIVE, SCOPE, AND METHODOLOGY

The overall objective of the review was to determine whether IFS was implemented and was operating as designed by the Army.

To evaluate the standard system, we interviewed responsible agency officials, evaluated the sytem design documentation, analyzed system reports, and reviewed Army regulations, guidance, and prior Army and GAO audit reports related to facilities engineering functions. Our work was performed at the Office of the Chief of Engineers, Washington, D.C.; the Facilities Engineering Support Agency, Ft. Belvoir and Ft. Lee, Virginia; and various Army major commands and installations. The audit was made in accord with generally accepted government auditing standards.

BACKGROUND

The Army owns real property facilities (buildings, roads, and so forth) with an estimated replacement value of $150 billion. These facilities are operated and maintained by approximately 48,000 employees at an annual cost of about $3.8 billion.

To effectively operate and maintain this real property, the Army needs accurate and timely information on its condition, including the estimated cost of maintenance and repairs. The Army uses this information as a basis for (1) budgeting for maintenance and repair funds, (2) effectively and efficiently using the funds provided to accomplish the maintenance and repairs, and (3) reporting on how those funds were used as well as the updated condition of the real property, including the current backlog of maintenance and repairs. The same information is needed by the Congress each year as one basis for appropriating funds for repairing and maintaining real property. Historically, Army internal auditors, GAO,

and the Congress have questioned the validity of data reported by the Army on the status of its real property and backlog of maintenance and repairs.

In order to be better able to provide this information, the Assistant Secretary of the Army (Installations and Logistics), in 1967, directed the development of IFS. Testifying before the Subcommittee on the Military Construction Appropriation, House Committee on Appropriations, in 1970, an Army official stressed the importance of having such a system. The official stated that IFS would (1) more clearly present the Army's monetary needs for maintaining and repairing facilities and (2) substantially improve the validity of the Army's reported backlog of maintenance and repairs.

In developing IFS, the Army intended for it to provide information on the inventory of Army real property including the (1) maintenance and repairs needed on facilities, (2) status of work in process, and (3) history and cost of work performed on facilities. These data were to be collected at the installation level and consolidated, summarized, and reported through the major commands to Headquarters, Department of the Army.

THE ARMY HAS NOT REALIZED BENEFITS FROM THE SYSTEM AS PLANNED

Despite spending over $100 million since 1967 in developing, maintaining, and operating IFS, the Army has not realized many of the benefits it originally anticipated from the system. As discussed in the report we issued to the Congress last year, installation managers are not using the system for managing facilities engineering operations. Further, the Department of the Army still must manually compile most of the real property facilities data for its own use and for reporting to the Congress.

IFS is being redesigned

The Army, recognizing that IFS is not providing installation managers or the Department of the Army with accurate and timely data on Army real property, began redesigning the system in 1981. The redesign is aimed at improving the current system so that it better meets the needs of system users by providing

- --data elements which are more pertinent for managing facilities engineering operations,

- --system reports with facilities engineering data in more usable formats and on an exception basis, and

- --data more promptly.

The redesign, scheduled for completion in 1985, is being done in conjunction with the Army's procurement of new automatic data processing equipment.

Properly done, we believe the redesign effort, along with the correction of those problems identified in our report to the Congress last year, will result in a better overall system. However, until the Army corrects two other problems, that is, not implementing IFS at all installations as planned and installations not inspecting their real property as required, the anticipated benefits of the standard system will not be realized.

The Army has not implemented the
system at all the planned sites

Although IFS has been designated the Army's standard real property management information system, approved for Army-wide use in 1976, many installations still have not implemented it. As of May 1983, 7 years after implementation began, only 75 of the 138 installations initially intended to receive the system had implemented it. Two major commands, the U.S. Army, Europe and the U.S. Army Materiel Development and Readiness Command, comprise 57 of the 63 installations which have not implemented IFS.

The U.S. Army, Europe began implementing a portion of the current system in fiscal 1983. Implementation was not started earlier primarily because existing IFS computer software would not operate on the automatic data processing equipment used by U.S. Army, Europe. Recently, that command acquired new equipment which will enable activities to operate the portion of the existing system involving development of an inventory of real property facilities. The Army has approved implementation of this portion of the system at U.S. Army, Europe activities. These activities will implement the remaining portion of IFS after the system is redesigned.

The U.S. Army Materiel Development and Readiness Command was originally scheduled to begin implementing IFS in fiscal 1977. However, because of problems in interfacing IFS with the Materiel Development and Readiness Command's unique accounting systems, this schedule was not met. Although a 1980 study showed that the command needed an automated system to support the facilities engineering function and that IFS, with certain design modifications would be the most appropriate system, command officials contended that those modifications would be too costly to be worthwhile. As a result, the command still has not begun implementation of IFS.

As a standard Army system, one of the primary benefits IFS was to have provided was the capability to automatically compile Army-wide data on the inventory and condition of its real property facilities, including the backlog of maintenance and repairs. However, to the extent IFS has not been implemented at all sites intended to receive the system, the capability has not been achieved. Thus, to have such summary data for its own use as well as for reporting to the Congress, the Army must still manually collect and compile information from many installations.

Implementation of the current system at additional installations has been suspended during the redesign effort. We support this action. However, so that this problem does not continue to

adversely effect the capability to produce Departmentwide real property data after the redesign, the Army should ensure that the revised system is truly an Army-wide standard system and is promptly implemented at all sites where planned.

Army installations have not completed facilities inspections

Many Army installations have not inspected facilities as required to determine their condition and the estimated cost to correct deficiencies. Thus, data critical to the operation of IFS has not been entered into the system.

A key element of the Army's plan for IFS was the establishment of a complete inventory of real property facilities at the installation level, the condition of those facilities, and the estimated cost to correct deficiencies. To do so, the Office of the Chief of Engineers required Army installations implementing the system to initially inspect all of its facilities and then to establish a program for recurring inspections. Once entered into IFS, the data from these inspections were to serve as a tool for conducting facilities engineering functions at the installation level by providing managers with a current inventory of real property, the types of deficiencies, a mechanism for ranking necessary maintenance and repairs, and estimates of the cost to accomplish that work. It also would enable installations to automatically report facilities related data, including the backlog of maintenance and repairs, through major commands to Department of Army headquarters. In addition to being used by management at headquarters, the data was to have been compiled and formated in reports for the Congress.

Army installations have not inspected all of their facilities. Further, most installations had not established a recurring inspection program. The status, according to IFS records, of the 56[1] installations inspecting buildings and other facilities as of September 30, 1982, follows.

Percentage of inspections completed	Number of installations performing inspections of	
	Buildings	Other facilities
0-25	8	21
26-50	5	18
51-75	15	4
76-100	28	13
Total	56	56

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[1]Information was not available in the headquarters IFS data base for 19 of the 75 installations operating the system.

Officials at installations we visited told us that the main reason the inspections had not been done was a lack of sufficient staff. They pointed out that in addition to the inspections being very time consuming, they felt that the information to be obtained from them was of little benefit to the installations.

Since 1976, when IFS was approved as a standard Army system, in anticipation of the increased workload under IFS, the Department designated 718 personnel spaces to be allocated to the major commands and installations for implementing and operating IFS. These 718 employees were supposed to have done things such as inspect facilities, enter data into IFS, and oversee IFS operations at the installation level. However, once allocated to an installation, there was no requirement that the additional personnel be assigned to positions directly related to IFS operation. Although records were not available to show precisely where extra staff were allocated or to determine how many of them were working on IFS, most officials we talked to at Army headquarters as well as at the major commands said it was likely that some of the additional staff were diverted to other functions.

To the extent installations have not inspected their real property facilities as required, or have not entered the data from those inspections into IFS, the information contained in the system on the backlog of maintenance and repairs is incorrect. For example, although IFS data indicated no backlog of maintenance and repair work at Fort Jackson, South Carolina, manual records maintained by facilities engineers showed a backlog of $14.6 million worth of work as of September 30, 1981. The Army recognizes that data now in IFS on needed facility maintenance and repairs is largely inaccurate. As a result, it must manually collect and compile most of the information from individual installations for its own use as well as for reporting to the Congress.

Because the installations generally did not comply with the requirement for facilities inspections, the Army revised its policy, effective October 1, 1982. Under the revised policy, installations can perform facilities inspections on a statistical sample basis and, based on those inspections, project a total of existing deficiencies. This change should reduce the amount of resources needed for facilities inspections.

CONCLUSIONS AND SUGGESTIONS

After 16 years of effort to design, implement, and operate IFS, the Army has not been able to use the system to provide real property facilities information for use by all levels of management as originally intended.

The current effort to redesign IFS, in conjunction with procurement of new automatic data processing equipment, and other system improvements, should result in a system that will be capable of better serving user needs.

However, in order to realize the benefits originally envisioned from the new standard system, we suggest that prior to implementation, the Army

--address and resolve any equipment or systems integration problems so that the new system can be fully implemented Army-wide,

--provide adequate staff resources so that the system is properly operated and used, and

--require installations to adhere to the Office of the Chief of Engineers requirement for facility inspection programs.

We would appreciate hearing your views on our suggestions within 60 days of the date of the report.

We are sending copies of this report to the Director of the Office of Management and Budget and the Secretary of the Army.

Sincerely yours,

W. D. Campbell
Acting Director