Dear General Clarke:

The General Accounting Office has reviewed certain activities of the revolving fund of the Corps of Engineers, Department of the Army. Our review included an examination of accounting and billing procedures; calculation of replacement charges; equipment and facility utilization; and the overall management control of revolving fund activities. Our work was performed at Corps district offices in Seattle, Washington; Portland, Oregon; Omaha, Nebraska; Kansas City, Missouri; St. Louis, Missouri; and Memphis, Tennessee; and at the Office of the Chief of Engineers (OCE) in Washington, D.C.

The Corps' revolving fund centralizes the operation and financing of common services and facilities used in the civil works program. Obligations incurred by the fund are about $600 million annually and cover expenses incurred in providing services to authorized projects, for which the fund is reimbursed through billings to appropriated funds.

Our review of accounting and management activities of the revolving fund showed weaknesses in the operation of repair facilities, application of replacement charges, reporting of equipment utilization, and enforcement of accounting procedures. These specific weaknesses are discussed in subsequent sections of this report.

INEFFICIENT OPERATION OF REPAIR FACILITIES ON THE MISSOURI RIVER

The Corps owns and operates two maintenance and repair facilities on the Missouri River—Omaha, Nebraska, and Gasconade, Missouri—which were needed, over the years, to service the various types of floating plant and support equipment necessary to meet construction and maintenance requirements on the Missouri River. Today, new work on the River is at a minimum, and the workload at the repair facilities has declined to the point where continued operation of the repair and maintenance facilities is no longer economical and, in fact, is contrary to the Corps' policy of requiring maximum economic utilization of all revolving fund-owned equipment and facilities.
Our review of activities at the Gasconade Boatyard which has been in operation since November 1, 1892, illustrates the need to evaluate the operation of these facilities. It has about 74,000 square feet of floor space located on about 30 acres of land adjacent to the confluence of the Missouri and Gasconade Rivers. No boats have been built at the facility since 1949 and the maintenance workload has been declining since that time. The cost of operating the boatyard during fiscal year 1970, including repair and maintenance of operating plant and equipment, manufacture and fabrication of parts, flood control and rescue services, and services furnished to other Corps offices, was about $506,000.

At the time of our review, most of the shops were vacant and the equipment was idle. The machine shop houses a tool room and about 20 pieces of equipment such as metal lathes, drill presses, milling machines, and power saws. The equipment appeared to be in working condition, but records showed that the 20 pieces of equipment were used only a total of 482 hours during fiscal year 1970.

We discussed the situation at Gasconade with the Chief of the Kansas City District's Operation Division who advised us that he was initiating a study to determine a more economical way of repairing the District's equipment.

With the gradual phase down of construction work on the Missouri River and the improved condition of the river itself, the present workload at the maintenance and repair facilities indicates a questionable need to retain these facilities in their present capacity. We believe the necessary repair work could be accomplished in a more economical manner by consolidating facilities or by closing certain of the facilities and contracting for the required services.

**Recommendation**

We recommend that the need for the Gasconade Boatyard and similar repair facilities at other locations be evaluated and a determination made as to whether it would be more economical to consolidate or close some of the facilities and have the work performed by contract.

**IMPROVEMENTS NEEDED IN DEVELOPING REPLACEMENT CHARGES**

The Corps revised its accounting methods in fiscal year 1964 to provide funds for the replacement of existing plant and equipment without requesting direct appropriations. A charge to provide revenues for the increasing cost of replacing plant and equipment was added to the rental rates being billed to projects on which the equipment was used. We noted the following inconsistencies in the manner in which certain districts were developing and applying the replacement charges:
1. Because OCE establishes the replacement charge for dredges and aircraft, the charges do not reflect any additions and betterments made to the plant after the charge is established. For example, in September 1969, a replacement charge of $64,000 was established for the dredge BURGESS owned by the Memphis District. Although additions and betterments costing about $208,000 were added to the dredge during fiscal year 1970, OCE made no adjustment to the replacement charge until 1971 when all replacement charges for dredges and aircraft were revised. In contrast, however, annual replacement charges computed by the Memphis District for its towboat MISSISSIPPI increased from $17,989 to $20,677 after additions and betterments costing $278,000 were made.

2. Annual replacement charges of about $29,000 were established for a group of excess barges converted to a floating dock in the Memphis District. The charges were computed and billed on the basis that the barges were still being used as barges and were to be replaced although the District had no plans to replace them.

3. Numerous mathematical errors were made in the calculation of replacement charges by the Seattle District during fiscal years 1970 and 1971. In addition, replacement charges of $20,285 for snag boats MANILA and PRESTON had not been collected from projects on which they were used during fiscal year 1970.

4. From January 1, 1964, to September 22, 1969, OCE did not revise the indices used by the districts to compute the replacement charges, even though price levels were rising each year. Although other districts unofficially updated the indices, the Portland and Seattle Districts continued to use the original indices during that period and, as a result, (1) charges for plant and equipment acquired prior to January 1, 1964, were not increased annually as the price level climbed, and (2) no replacement charges were established for plant and equipment acquired during the period. These deficiencies resulted in projects in the Portland District being undercharged by about $205,750.

We believe that improvements in developing and applying replacement charges would result not only in billing appropriated funds on a more equitable basis, but would also provide a uniform basis for evaluating the effectiveness of similar types of plant and equipment owned by the revolving fund in various districts.
Recommendation

We recommend that the policies and practices for establishing and applying replacement charges be evaluated and appropriate revisions made to ensure that such charges are properly calculated and equitably applied on a consistent basis.

IMPROVEMENTS NEEDED IN REPORTING
EQUIPMENT UTILIZATION

The utilization of floating plant, as well as methods of accounting for and reporting such utilization, varied among the district offices examined. Corps regulations require each district to report annually to OCE all equipment with less than 30 days utilization and to either justify retention of that equipment or dispose of it. Engineering Regulation 1125-2-300, effective June 22, 1971, revised the time period to 45 days. These utilization retention reports used by the districts appear to be of questionable value as a management tool because (1) even 10 minutes usage counts as a utilization day and (2) the reports are not always submitted.

We found that the Kansas City District Office was maintaining several pieces of floating plant with little or no utilization which were justified on the utilization report on the basis of emergency operations, possible use on unpredictable river conditions, or as spare pieces. We questioned the need for the retention of some of the equipment and the District subsequently declared 32 items of equipment excess, resulting in a savings to the Corps of about $170,000.

The Seattle District Office did not prepare the required reports justifying retention of equipment used less than 30 days in fiscal years 1966, 1969, and 1970. Because the Seattle District Office did not prepare these reports, we, as well as OCE, could not determine how long five items exceeded during fiscal year 1970 were underutilized. The District, however, was incurring charges of about $6,850 annually to operate and maintain the equipment it eventually crossed.

Although the Memphis District prepared reports on equipment used less than 30 days, we were unable to evaluate the effectiveness of the equipment because the utilization reports were based on the days the equipment was rented rather than on the days the equipment was used. Rental charges on a piece of equipment begin one day prior to the day it leaves its home station and continues for the period it is away from the home station regardless of whether it is actually being used. We believe that this method of reporting does not provide OCE with a reasonable basis to accurately determine whether the equipment is being effectively utilized.

The utilization reports required by OCE to justify retention of equipment is designed as a management tool to monitor and plan for the
equipment needs of the districts and obtain maximum utilization of equipment owned by the revolving fund. However, we believe that the problems noted during our review detract from the value of such reports and indicate the need for revised procedures to ensure timely reporting on a uniform basis that reflects actual use rather than time billed to the using project or agency.

Recommendation

We recommend that the submission of utilization reports be more closely monitored to ensure uniform reporting on the basis of actual usage.

NEED FOR IMPROVED ENFORCEMENT OF ACCOUNTING PROCEDURES

Our review disclosed numerous weaknesses in accounting for revolving fund activities which we believe continued undetected and uncorrected because neither the districts' internal review staffs nor the Army Audit Agency reviewed the financial management of the fund.

Some of the weaknesses noted, mostly in the Seattle District, are indicated below.

---Revolving fund plant and equipment were used on projects but the projects were not always billed for their usage.

---Transportation expenses on newly purchased equipment received from other Government agencies were not always capitalized.

---In some instances income was not recorded in the month in which it was earned.

---The costs of operating a snagboat and a survey boat as part of a community relations program were charged to an appropriation for clearing debris from navigable waters instead of to an overhead account.

---The subsidiary and general ledger accounts were not reconciled and the necessary year-end adjustments had either not been made or were incorrect.

---Many depreciation charges for new equipment were incorrect or inconsistently computed.

---Depreciation expense was not always charged from the first day of the month nearest the acquisition date of equipment.

---Salvage values varied considerably in relation to total book cost for similar equipment items.
While many of these errors are not material, we believe they are indicative of a need for a greater emphasis on improving accounting practices. The overall audit of revolving fund activities is the responsibility of the Army Audit Agency; the Corps' internal review staffs are used to ensure that management is effective, operations are efficient and economical, and internal controls are adequate and consistently applied. The financial aspects of the revolving fund in some of the districts we reviewed have not been audited by the Corps' internal review staff or the Army Audit Agency since 1968; financial aspects of other districts have not been audited since 1966.

**Recommendation**

We recommend that internal controls be strengthened to ensure improved accounting on a continuing basis.

We appreciate the cooperation and assistance given to our staff by your representatives during the review. We shall appreciate receiving your comments regarding any actions taken on the matters discussed in this report.

Sincerely yours,

Wilbur D. Campbell
Assistant Director

Lieutenant General F. J. Clarke
Chief of Engineers
Department of the Army
Room 4D-013
1000 Independence Avenue, S. W.
Washington, D. C. 20314
Dear Mr. Hollingsworth:

The General Accounting Office has reviewed the actions taken by the Atomic Energy Commission (AEC) to provide for the development and implementation of adequate quality assurance programs in conducting its various activities. Our review was performed at AEC Headquarters, Germantown, Maryland; AEC's Chicago, Idaho, and Richland Operations Offices; and at contractor locations under the jurisdiction of these offices—Argonne National Laboratory, Argonne, Illinois; Atlantic Richfield Hanford Company, Richland, Washington; Douglas United Nuclear, Inc., Richland, Washington; Idaho Nuclear Corporation, Idaho Falls, Idaho; National Accelerator Laboratory, Batavia, Illinois; and WADCO Corporation, Richland, Washington.

With respect to the licensing of production and utilization facilities, AEC has defined quality assurance as comprising:

"*** all those planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises those quality assurance actions related to the physical characteristics of a material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements."

The programs of the Divisions of Space Nuclear Systems, Naval Reactors, and Military Application have had formal quality assurance procedures for many years. For the past several years, AEC officials have emphasized the need for increased attention to and more effective application of quality assurance practices in reactor development programs to (1) help prevent costly expenditures due to deficiencies, (2) conserve materials and manpower, and (3) provide greater assurance of the successful achievement of program objectives.

In our report to the Congress, dated August 17, 1971, on the "Cost, Schedule; and Design Aspects of Selected Atomic Energy Commission Construction Projects" (B-164105), we pointed out that a quality assurance program was instituted and emphasized by the Division of Reactor Development and Technology (RDT) for the Loss of Fluid Test Facility project because of problems being encountered in the construction of certain other