

DOCUMENT RESUME

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[Interim Upgrade of Equipment for the Department of Agriculture's Fort Collins Computer Center]. LCD-77-104; B-146864. July 1, 1977. 5 pp.

Report to Rep. Jack Brooks, Chairman, House Committee on Government Operations; by Elmer B. Staats, Comptroller General.

Issue Area: Federal Procurement of Goods and Services (1900); Federal Records Management (1400).

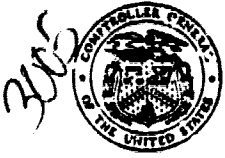
Contact: Logistics and Communications Div.

Budget Function: Miscellaneous: Automatic Data Processing (1001); Miscellaneous: Financial Management and Information Systems (1002).

Organization Concerned: Department of Agriculture; Department of Agriculture: Fort Collins Computer Center, CO.

Congressional Relevance: House Committee on Government Operations; Senate Committee on Agriculture, Nutrition, and Forestry.

The acquisition by the Department of Agriculture of a Univac 1100/42 computer system as a replacement was reviewed to determine whether there was justification for procurement and noncompetitive procedures. The need to upgrade the system evolved from plans to establish large-scale regional computer centers. In anticipation of the procurement of computer systems, the Department established the Fort Collins Computer Center. Findings/Conclusions: Transfer of work from Forest Service field offices and cancellation of the procurement program caused a workload that exceeded the capacity of the existing system. However, cost analyses were not prepared for Forest Service applications systems to be transferred to the Center, and improper methods were used to compare costs with commercial service. The new system was needed because the existing one was being operated at maximum capability and the workload was increasing, but better planning could have limited the size of the workload transferred by the Forest Service which would have prevented this situation and allowed time to conduct fully competitive procurement. (HTW)



COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON, D.C. 20548

02955

B-146864

JUL 1 1977

The Honorable Jack Brooks, Chairman
Committee on Government Operations
House of Representatives

Dear Mr. Chairman:

Your letter of January 17, 1976, requested that we review the Department of Agriculture's plans to upgrade equipment at five computer centers and to determine whether the proposed procurements were justified and needed to be noncompetitive. This letter covers our review of the acquisition of a Univac 1100/42 computer system to replace a Univac 1108 system at the Fort Collins Computer Center. We previously reported on our reviews of proposed procurements for the Washington, St. Louis, Kansas City, and New Orleans Computer Centers. We are preparing a report on the results of a second equipment proposal for the New Orleans center.

The Univac 1100/42 system was needed to provide the Center with additional computer capacity. The Univac 1108 system was being operated at maximum capability and the workload was increasing at a rate sufficient to saturate the system by October 1976. However, we believe that better planning of work transferred to the Center might have prevented saturation of the Univac 1108 system and precluded the acquisition of the Univac 1100/42 system. Then there would have been sufficient time to conduct a fully competitive procurement. These matters are discussed below.

NEED FOR NEW SYSTEM

The need to upgrade the Univac 1108 system evolved from Agriculture's plan to establish large-scale regional computer centers and to equip them with computer systems that were to be acquired competitively through a major procurement program. As part of that plan, and in anticipation of the major procurement, which was to have been completed by June 1975, Agriculture established the Fort Collins Computer Center in February 1974. It was equipped for the interim period with the Univac 1108 system primarily to accommodate the Forest Service field offices. At that time, the field offices, which were using other Government data processing facilities and commercial service bureaus to process their workloads, transferred workloads to the Center.

In November 1974, when the Center had unused computer capacity, the Forest Service directed its field offices to use the Center's computer more fully by transferring more work. The transfers were made without adequate regard to the capacity constraints of the Univac 1108 system and comparative cost analyses. When the major procurement program was canceled in October 1975, the additional work transferred had increased the Center's workload to a point approaching saturation, thereby generating a requirement for additional capacity.

Because of the pending saturation and the cancellation of the procurement program, Agriculture completed a requirements study in November 1975. The study concluded that the workload was already exceeding the capacity of the Univac 1108 system and that all known performance enhancements had been exhausted. The study included projections of workload growth and evaluation of various Univac computers and configurations to determine the best equipment alternative for upgrading the Univac 1108 system. The results indicated that the Univac 1100/42 system was the best alternative from the standpoint of cost, performance, and capacity.

In January 1976 Agriculture requested authority from the General Services Administration to upgrade the Center's equipment and submitted justification documents. These included the cost study required by Federal Management Circular 74-5 (FMC 74-5) and Office of Management and Budget Circular A-76. The cost analysis compared the cost of processing all of the Center's work through a commercial service bureau with the cost of acquiring the Univac 1100/42 system on an interim basis for 3 years. The study showed that acquiring the Univac 1100/42 would be the more cost-beneficial alternative.

In April General Services requested Agriculture to make another study comparing the cost of the Univac 1100/42 system with the cost of placing overflow work with a commercial service bureau. That study showed that the acquisition of the Univac 1100/42 system was still the more cost effective alternative for the 3-year interim period. General Services then granted Agriculture procurement authority with a proviso that a replacement system be competitively procured within 3 years.

In July 1976 Agriculture acquired the central processing unit for the Univac 1100/42 system from the manufacturer on a sole-source basis, but acquired the peripheral equipment from other vendors on a fully competitive basis. Agriculture plans to lease the system for about 3 years, or until a replacement system can be competitively procured. The cost of leasing the system for the 3-year period will be about \$6 mil-

lion or about \$600,000 more than the cost would have been for the Univac 1108 system at existing lease rates; however, \$450,000 of the added cost is attributable to peripheral equipment which Agriculture had planned to acquire even if it did not acquire the Univac 1100/42 computer system.

GAO ANALYSIS OF JUSTIFICATION

In reviewing Agriculture's justification for acquiring the Univac 1100/42 system, we verified that the Center had achieved maximum utilization of the Univac 1108 system by improving its operating procedures and workload scheduling, extending its shift operations, acquiring additional peripheral equipment, and optimizing usage of computer equipment and software. These improvements and enhancements provided some additional computer capability but not enough to handle the projected workload growth.

Our analysis of the workload projection indicated that there was a workload growth of about 4 to 5 hours a month. This growth would have saturated the Univac 1108 system by October 1976, or about 3 months after the Univac 1100/42 system was installed.

Agriculture's workload projection included new applications (work) being developed and applications that field organizations planned to transfer from Forest Service installations and commercial service bureaus to the Center during the 3-year life of the Univac 1100/42 system. We found that the transfer of those applications was not supported by a comparative cost analysis for each application system and that the method used for costing the overall transfer was inappropriate.

No cost analyses for individual applications

Agriculture did not prepare individual cost analyses for Forest Service applications systems that were to be transferred to the Center. In the absence of such cost analyses and since processing costs vary for each application, Agriculture did not have an adequate basis for determining which applications should be transferred to the Center.

Agriculture's plan to transfer work to the Center will require that the work be converted for use on the Univac 1100/42 system. When the replacement system is competitively acquired, all work on the existing system will have to be converted to the new system. Some of the interim conversion costs could be avoided in those cases where it may be less expensive to use other data processing facilities.

Improper costing method

Although Agriculture compared the cost of the upgrade with the cost of processing the overflow work at a commercial service bureau, we found that Agriculture used an improper method of costing Forest Service applications systems being processed by commercial service bureaus and new applications that were planned. Agriculture used a fixed overhead rate for the system development and maintenance cost for all the applications even though the cost normally varies with each application. As a result, Agriculture may have overpriced the cost of some commercial work which could invalidate the cost comparisons as a basis for transferring Forest Service work to the Center.

We believe that Agriculture should recompute the comparative costs on an application system by application system basis using the proper cost factors before it transfers more work to the Center.

An Agriculture official told us that before any application systems are transferred to the Center, they will be evaluated individually. We believe that such evaluations could assure the processing of that work as economically as possible over the system life of the Univac 1100/42 system.

ALTERNATIVES CONSIDERED

As required by FMC 74-5, Agriculture explored various alternatives for acquiring additional computer capacity after it determined that the Univac 1108 system was saturated. The alternatives included using commercial service bureaus and other Government computer centers, acquiring an additional Univac 1108 system, and using other Univac models such as the Univac 1110.

Agriculture also benchmarked (live test demonstration) three different Univac 1100/42 equipment configurations and three Univac 1110 equipment configurations to select the computer model that would be optimal in size and cost for the interim period. From this benchmarking and an additional analysis, Agriculture selected the Univac 1100/42 system on the basis that it would be the most cost-effective computer for processing the projected workload over the 3-year period.

We were advised by GSA that checking into the third party market disclosed that no Univac 1100/42 systems were available from that source at the time the procurement authority was delegated.

CONCLUSIONS

We believe that the acquisition of the Univac 1100/42 system in July 1976 was appropriate under conditions that existed at the time. The Fort Collins Computer Center needed additional computer capacity.

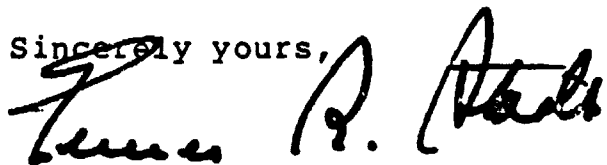
However, we believe that the need for the system could have been avoided had the Forest Service in November 1974 adequately planned the transfer of data processing work to the Center based upon the available capacity of the Univac 1108 and cost comparisons for each application system or work involved in the transfers. By better planning, the Forest Service could have limited the size of the workload transferred to within the capacity constraints of the Univac 1108 and the transferred application systems to those requiring minimum conversion costs and could have continued to use commercial service bureaus or other sources to process the balance of the workload. This would have allowed the Center to operate until a competitive procurement of a new system was completed and would have minimized conversion costs related to the new system.

We also believe that any transfer of work to a computer system acquired on an interim basis should be preceded by a cost comparison to show that the transfer is justified.

We have discussed this report with Agriculture officials who agreed with the facts presented.

As discussed with your office, we are sending copies of this letter to the Chairmen of the Senate Committee on Governmental Affairs and its Subcommittee on Reports, Accounting, and Management; the Senate Committee on Agriculture, Nutrition, and Forestry; and the Subcommittees on Agriculture and Related Agencies of the Senate and House Committees on Appropriations; the Secretary of Agriculture; and the Administrator of General Services.

Sincerely yours,



Comptroller General
of the United States