UNITED STATES GENERAL ACCOUNTING OFFICE

WASHINGTON, D.C. 20548

# RELEASED

HUMAN RESOURCES
DIVISION

B-201668

SEPTEMBER 1, 1981

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

Dear Mr. Chairman:

> Subject: Relocating Social Security's Central Computer
> Operations: Recent Agency Planning and Management
> Has Been Good, But Further Precautions Should Be
> Taken to Reduce Risks (HRD-81-134)

As part of our comprehensive review of the Social Security
Administration's (SSA's) systems development plans, performed at
your request, we have been monitoring the agency's efforts to re-
locate its central computer facility from its present location at
agency headquarters in suburban Baltimore to a newly constructed
computer center building less than a mile away. Although we
identified several questionable aspects of SSA's early relocation
planning, the agency has acted to resolve these issues and has
generally planned and managed the relocation activities well.
Nevertheless, SSA's service to the public could be adversely
affected if the agency installs service-related systems in the
new building before it is totally ready to accept computer opera-
tions. Therefore, we believe SSA should closely monitor efforts
to solve certain problems that have impeded building readiness
and adjust its schedule for relocating service-related systems
accordingly.

BACKGROUND

Since establishing its operations in Woodlawn, Maryland, in
1960, SSA has used the second floor of its Operations Building
to house its central automatic data processing (ADP) operations.
Constructed as general-purpose office space, that site was consid-
ered adequate during the early days of SSA's computer operations,
but as the size and complexity of those operations grew, SSA recog-
nized serious deficiencies in the facility. These deficiencies

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included (1) limited fire protection, (2) inadequate support fa-
cilities, such as air-conditioning, chilled water, and electric
power, (3) inadequate physical security, (4) an ADP layout that
hampers workflow due to crowding and long distances between equip-
ment, data storage, and personnel areas, and (5) a lack of flexi-
bility. SSA concluded that the best way to overcome these prob-
lems was to construct a special building to house its computer
operations. Planning for the computer center building began in
1971, and construction, which began in 1976, is expected to be
completed in October 1981 at a cost of more than $72 million.

When completed and fully occupied, the new computer center
should enable the agency to lessen certain environmental problems,
such as electric power interruptions, that have hampered its ADP
operations. However, as the Department of Health and Human Serv-
ices (HHS) noted in recent letters to the House Ways and Means
Subcommittees on Oversight and Social Security, the new center is
not the solution to SSA's overall ADP problems. The building will
do little to alleviate the adverse effects of archaic, undocumented
software and insufficient numbers and technical skills of SSA sys-
tems personnel. As the Commissioner of Social Security stated dur-
ing recent testimony before the House Ways and Means Subcommittees,
these are two of SSA's most serious ADP systems problems.

## SSA's approach to planning
## and managing the relocation

Relocating SSA's ADP workloads and systems to the new building
is a large, complex undertaking with a potentially high risk of
disrupting service to the public. It involves most of SSA's sys-
tems personnel, hundreds of applications programs, several hundred
thousand reels of magnetic tape, 16 large-scale central processing
units, about 500 magnetic tape drives, approximately 460 disk
drives, and a large complement of other computer equipment, such
as printers, card readers, consoles, and telecommunications equip-
ment.

SSA began planning for the relocation in 1976, but undertook
a more coordinated effort in late 1979 and early 1980 by establish-
ing the current Move Project Team. That team consists of a Move
Project Manager, reporting directly to the Acting Associate Commis-
sioner for Systems, and eight full-time specialists in such sub-
jects as budget and contracting, hardware, software, and facilities.
The Move Project Team is responsible for determining the agency's
overall relocation strategy and for coordinating key move-related
activities among HHS, the General Services Administration, more
than 20 contractors and subcontractors, and numerous SSA components
assisting in the move. The team revised the overall relocation
strategy in February and September 1980 and July 1981, and SSA's

primary relocation contractor--hired in August 1980 to serve as the focal point for detailed relocation planning and execution--has been expanding and refining that general strategy into detailed, phased steps for moving hardware and software.

## SSA's overall strategy for relocating its ADP workloads and systems

In setting goals and priorities for the relocation, SSA established that its overall strategy should be aimed first at assuring the lowest risk to the continuity of daily operations, second at completing the relocation as quickly as possible, and third at incurring the lowest overall cost. To achieve these goals SSA has developed a sequence of workload transfers and equipment moves scheduled over a 24-month period, at an estimated cost of almost $30 million.

To begin the process, SSA is to transfer certain individual workloads to one or more of three "bridge" computers installed in the new computer center specifically to provide "turnaround" computer capability for the relocation. By freeing up the computers that had previously processed those workloads, this transfer enables SSA to move these systems to the new center and later use them either as "bridges" for the next sequence of workload transfers or to receive and once again process their original workloads. This process is to be repeated until all workloads and systems have been relocated.

In following its strategy, by March 1981 SSA had acquired and installed the three "bridge" computer systems, and in June 1981 it experienced no major problems in transferring its first major computer system workload--from its Test and Time Sharing Facility computer system--to one of these computers in the new center. During July the agency disassembled the vacated computer system in the existing facility which had been processing this workload, reinstalled it in the new center, and began using it to support production operations. SSA has also moved several hundred systems personnel into the new center. The first major service-related computer system workload to be moved--from two large-scale computers making up the telecommunications system--is scheduled for relocation in mid-September. For the past several months, SSA has been running backlogged production work on the bridge computers.

## OBJECTIVES, SCOPE, AND METHODOLOGY

We performed our work as part of an extensive investigation of SSA's total system development plans, undertaken in response to your October 13, 1978, request. In your request you referred

to SSA's concurrent pursuit of certain systems projects and expressed concerns about the cost implications of such projects and the potential adverse impact on the American public if the projects fail. We included the relocation of SSA's central computer operations in our review because its magnitude and complexity would (1) require significant expenditures for acquiring additional ADP resources and personnel services and (2) present substantial potential risks to the continuity of ongoing ADP operations at SSA and thus to public service.

We performed our work at SSA and Health Care Financing Administration (HCFA) headquarters in Baltimore, Maryland, and HHS offices in Washington, D.C. We reviewed numerous planning documents—including the original and revised versions of SSA's MACRO Plan for Occupancy of the New Computer Center—as well as relocation status reports and technical reports by SSA and by consultants concerning the relocation itself or related topics. We also reviewed various procurement documents and contract files concerning the acquisition of computer equipment and services necessary to carry out the relocation. We discussed the relocation project with SSA's Move Project Manager and various other personnel from SSA, HCFA, HHS, the General Services Administration, and the Office of Management and Budget. In addition, we visited the current computer facility and toured the new computer center several times. We have periodically briefed staff of your Committee concerning the results of our work and have discussed our observations and related concerns with SSA and HHS officials on several occasions.

In monitoring SSA's relocation activities, we concentrated on the planning and management of the relocation and the readiness of the new computer building. Our primary concern was that service to the public not be adversely affected by relocation activities.

## RECENT RELOCATION PLANNING AND MANAGEMENT BY SSA HAS GENERALLY BEEN GOOD

Since placing the relocation under the direction of the Move Project Manager, SSA has, for the most part, effectively planned and managed the move. Our review indicates that the Move Project Team generally has been thorough, systematic, and yet flexible in carrying out these functions. Several problems we identified in early versions of SSA's overall relocation plan have been resolved satisfactorily.

SSA's July, August, and September 1979 versions of its overall relocation plan included a sequence for moving workloads and systems which we questioned. Specifically, it provided that the large-scale computers making up SSA's telecommunications system would be relocated first. We questioned whether these computers

should be moved first because of the critical role the telecom-
munications system serves in SSA's daily operations. We felt SSA
could obtain valuable experience by first moving a less critical
system, and in January 1980 we suggested to top SSA and HHS of-
ficials that they reassess moving the telecommunications computers
first. The Move Project Manager had similar concerns, and in
February 1980 he revised SSA's strategy so that the Test and Time
Sharing Facility system was scheduled for relocation before the
telecommunications computers and the other service-related systems.

During our work we noted that SSA's relocation planning, which
began in 1976, had not been evaluated by any independent outside
sources. We felt such an evaluation was important because SSA had
only limited experience in relocating large-scale computer systems.
In late 1979, an Office of Management and Budget official told us
that, in the Office's view, SSA should have its relocation strategy
evaluated by an independent outside party. We advised SSA and HHS
in January 1980 that we supported such an evaluation. In February
1980 SSA hired the MITRE Corporation, a Federal Contract Research
Center, to perform an independent evaluation of its plans for re-
locating ADP operations to the new computer center. That evalua-
tion, completed in June 1980, endorsed SSA's overall strategy and
produced eight studies which the Move Project Manager has found
valuable in managing relocation activities.

In August 1980 SSA entered into a broad-based consulting con-
tract with MITRE for additional services throughout the duration
of the relocation project. Under this contract MITRE provides an
independent quarterly assessment of relocation progress and prob-
lems. The quarterly MITRE reports we reviewed discussed such
topics as SSA's progress in acquiring needed ADP resources and the
continuing problems of completing key building construction ac-
tivities and establishing adequate building security.

From August 1979 to November 1980 SSA's relocation plan called
for freeing up and releasing one large-scale computer system and the
HCFA workload processed on it during the relocation. This provision
resulted from HCFA's desire to establish its own interim ADP capa-
bility, independent of SSA's computer operations. One of HCFA's
primary objectives was to take over the processing of its health
insurance workload rather than continue to rely on SSA. We ques-
tioned the proposed timetable for separating HCFA's workload and
the ADP resources used to process it because this introduced an
additional operational risk during the relocation that we felt was
unwarranted. We advised the Committee staff of our views on this
matter in November 1980. HCFA has since decided to follow your
subsequent suggestion and pursue a more comprehensive, long-term

approach to identifying and meeting its ADP needs, rather than try-
ing to establish its own interim processing capability. Thus, the
separation of ADP resources used by SSA to support HCFA is no longer
a potential problem for the relocation.

## BUILDING READINESS SHOULD BE FACTORED INTO SSA'S SCHEDULE FOR RELOCATING ITS SERVICE-RELATED WORKLOADS AND SYSTEMS

The relocation issue that continues to concern us more than
any other is the readiness of the new computer building and the
potential threat to public service if ADP operations are moved to
the building before it is secure and ready to accept computer
systems. In this regard we believe SSA might prematurely relocate
service-related ADP operations to avoid possible criticism if the
building remains substantially empty for any extended period after
its apparent completion. We noted indications that SSA has been
extremely sensitive to the possibility of such criticism and has
assigned high priority to occupying the new center as quickly as
possible.

Building readiness has been a constant problem since planning
for the relocation began. For example, in August 1980 SSA reported
that the building was 96-percent complete, and expected the lobby
and cafeteria to be completed by the end of the year. In October,
however, the agency acknowledged that the lobby and cafeteria were
still not finished, the security/fire/life safety system 1/ had
not yet been installed, and the uninterruptable power supply was
not operational.

In May 1981 SSA reported that the following problems still
remained with respect to building readiness:

--Limited elevator capacity, which would hamper ADP opera-
   tions because the vertical configuration of equipment in
   the new building requires substantial interfloor movement
   of magnetic tapes.

--Lack of voice communication between floors.

--Defects in the building's electrical system.

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1/A minicomputer-driven system costing about $4 million. When fully
   operational, it will provide entry and exit control; detection of
   fire, smoke, gas, and vibration; closed-circuit television moni-
   toring and video-taping; intrusion alarms; and elevator controls.

--Defects in the chilled water system which cools the computers.

--The still unfinished lobby, which has presented substantial security problems regarding access to the building.

In addition, installation of the security/fire/life safety system had not been completed.

During our most recent tour of the new building in August 1981, we observed that substantial work remained to complete the lobby and the automated security/fire/life safety system was still not fully operational. In addition, SSA was still working on the problems with the electrical and chilled water systems in the building, according to the Move Project Manager. He also told us that on the third floor of the new center, where computer equipment requiring a cool operating environment is being installed, about 30 of 60 air-conditioning units are not operating properly. When these items would be satisfactorily completed was unclear, but several--such as the lobby and the security/fire/life safety system--will probably not be completed until the end of October or later.

Thus, in our view, readiness of the new computer center remains a serious problem. Nevertheless, the Move Project Manager believes that there is a much more serious risk involved in continuing to house SSA's ADP operations at the current site than in moving them to the new building. In this regard he has emphasized that relocation to the new computer center should proceed as quickly as possible because the serious deficiencies in the electrical power, air-conditioning, fire protection, chilled water, and physical security systems within the current ADP facility pose a major threat to SSA's delivery of services to the public. Conversely, he has indicated that building readiness problems within the new center do not represent a threat to public service.

We agree that the deficiencies in the current facility pose a threat to the continuity of daily agency operations, but we are convinced that relocating ADP operations to a site that is not ready to accept them poses at least an equally serious threat to public service. For example, although inadequate physical security of ADP resources and beneficiary data has been a continuing problem in the current facility, we do not believe physical security will be any better in the new computer center until the lobby is completed and the security/fire/life safety system is fully installed and operating properly.

The Move Project Team has acknowledged that the complexity and magnitude of relocating SSA's computer operations could have presented a potentially high risk to SSA's daily operations, but believes that its detailed planning in formulating the agency's overall relocation strategy includes sufficient precautions and safeguards to reduce these risks as much as possible. Although we feel the team has done a good job in devising a minimal risk relocation strategy, we believe other factors associated with the relocation will tend to increase the overall risk to continuity of daily operations.

First, under its current relocation schedule, SSA will begin moving service-related ADP workloads and systems in September. These increasingly risky relocation activities will be proceeding at the same time that SSA will be trying to stabilize its ongoing ADP operations by alleviating serious software, hardware, and systems personnel problems currently plaguing daily operations. Both SSA and HHS have recently acknowledged not only the serious nature of these problems but also the long-term effort that will be required to solve them. SSA's current systems personnel problems will be even further increased because these personnel will be faced with a completely new ADP operating environment in the new computer center. In addition, the current operational staffing shortage will become even worse because initially more such personnel will be required to conduct ADP operations in the new center than in the existing facility.

These factors, when considered along with the risk presented by the relocation's magnitude and complexity, combine to present a substantial potential risk to public service despite the safeguards in SSA's relocation strategy. In our view, SSA should not increase that risk by proceeding with the relocation before the new computer center building is secure and ready to accept computer operations. Thus, we believe SSA should closely monitor efforts to correct the problems adversely affecting building readiness and adjust its schedule for relocating service-related workloads and systems accordingly.

CONCLUSIONS AND RECOMMENDATIONS

For the most part, SSA has done a good job recently in planning and managing relocation activities. Nevertheless, the agency will soon begin undertaking increasingly risky relocation activities as it moves its service-related workloads and systems. We believe SSA can and should take further precautions to ensure that these activities do not disrupt daily agency operations and service to the public. In this regard we recommend that, before beginning to relocate any service-related workloads or systems, SSA request the MITRE Corporation--which has been monitoring the status of

building readiness as part of its ongoing consulting services to the agency during the relocation—to perform a formal risk analysis assessing the agency's relocation schedule on the basis of overall building readiness, including security. MITRE should specifically be requested to advise top HHS and SSA management on whether the relocation of service-related ADP resources should be delayed and, if so, for how long. This advice should include pointing out specific elements which MITRE believes could impede service-related ADP operations or preclude adequate privacy protection and security of data and systems, and making suggestions for resolving them. SSA management should use the results of this risk analysis to help determine whether the agency's schedule for relocating service-related ADP resources should be adjusted.

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As you requested, we have not obtained formal agency comments on this report. As arranged with your office, unless you publicly announce its contents earlier, we plan no further distribution of this report until 30 days from its issue date. At that time, we will send copies to interested parties and make copies available to others upon request.

Sincerely yours,

Gregory J. Ahart
Director