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STATEMENT OF
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BEFORE THE
SUBCOMMITTEE ON MANPOWER AND HOUSING
GOVERNMENT OPERATIONS COMMITTEE
UNITED STATES HOUSE OF REPRESENTATIVES
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THE [EFFORTS OF THE DEPARTMENT OF LABOR TO DEVELOP
A COMPUTER SYSTEM TO SUPPORT
THE FEDERAL EMPLOYEES' COMPENSATION ACT PROGRAM]



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Testimony

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Madam Chairwoman and Members of the Subcommittee:

We are pleased to appear here today to discuss our review of the efforts of the Department of Labor (DOL) to develop a computer system to support the administration of the Federal Employees' Compensation Act (FECA) program. This review is being performed in response to your request of July 20, 1978.

Our efforts to date have been directed at assessing (1) the progress DOL has made since 1974 when it began to develop its computer system and (2) the overall management of this developmental effort within DOL.

BACKGROUND

The Federal Employees' Compensation Act was enacted in 1916 to provide a system whereby the Federal Government could compensate its employees and their dependents when an employee was injured in the performance of duty. The Employment Standards Administration (ESA) of DOL administers the FECA program through 15 district offices throughout the country.

The FECA Program has grown dramatically from fiscal year 1970 through fiscal year 1977:

--annual injuries reported by employees increased by 72.1 percent, from 120,625 to 207,615;

--annual claims increased by 70.3 percent, from 17,795 to 30,301;

--persons drawing compensation for extended periods increased by 90 percent, from 23,462 per year to 44,576; and

--annual benefits paid increased by 315.1 percent, from \$131.5 million to \$545.8 million.

The Department of Labor estimates that annual benefit costs will amount to \$1 billion by 1980.

Because of its increasing claims workload, ESA--in 1974--recognized the need to begin computerizing its claims processing activities. The computer system as originally contemplated by ESA had two basic objectives:

(1) To improve the processing of claims in the district offices; that is, to process claims in a shorter period of time, using less manpower and at reduced costs. The system was intended to computerize 28 claims processing steps that were being performed manually.

(2) To improve management's oversight of the FECA program by providing more accurate and timely information. The system was intended to satisfy six management requirements for information.

In 1974 it was estimated that 70 to 80 percent of the routine claims and bills would be processed automatically by the computer, with minimum input and interaction by the users. This would have dramatically reduced the number of cases requiring

individual review by the examiners and permitted the examiners to focus their attention on those cases actually requiring professional expertise.

It was also intended that the computer system would provide a variety of information for management oversight of the programs, including financial management information, claims histories, statistical information to project workloads and funding requirements, and information to measure and evaluate processing activities.

LITTLE PROGRESS MADE

Five years have passed since ESA began to develop its computer system, and over \$6 million has been spent by ESA in attempting to develop the system. However, little progress has been made. As of March 1979, despite three separate attempts to develop the system, only 2 of the 28 processing steps had been computerized and only one of the six management requirements had been even partially satisfied. I would like to briefly discuss each of these attempts.

First attempt

The first attempt began in May 1974, when a contract was awarded to Planning Research Corporation (PRC) to design and develop an information system to support the administration of the FECA program. In October 1974, PRC submitted its conceptual design to ESA which proposed a computer system that would perform all 28 processing steps and satisfy the

six management requirements for information. PRC worked under this contract for over 2 years at a cost of about \$1.5 million with little supervision and monitoring by ESA. According to an ESA report, during this 2-year period PRC clearly indicated --both verbally and in writing--that progress was on schedule and that the system design concepts were proving to be correct.

On August 10, 1976, the contractor reported that the system had been sufficiently tested and was ready for a pilot test in the New York District Office. The pilot test, for all practical purposes, was a total failure because of serious programming and coding problems. This unsuccessful pilot test severely affected operations in the New York District Office because manual processing was discontinued during the pilot test of the computer system and, as a result, most claims processing stopped for 3 weeks.

Both ESA and PRC attempted for about 1-1/2 months to determine the specific causes of the pilot test failure. However, the documentation describing the system--which had been developed by PRC--was found to be out of date and deficient in many respects. Therefore, it was virtually impossible to determine the specific causes of the failure.

This first attempt was terminated, based on a recommendation made by a technical review team from DOL's Office of the Assistant Secretary for Administration and Management. The basis for the team's recommendation was that too much

work had to be done to make the system operational, and that the estimated cost of operating the system as designed would be too much--\$6 million per year instead of the \$1 million to \$1.5 million estimated initially.

Second attempt

After the initial failure in New York, ESA redirected the project from a total system effort to the development of smaller subsystems. This was intended to provide a more manageable approach to the development of a claims processing system for the FECA program.

This second attempt--which to date has cost about \$4 million--has led to the computerization of 2 of the 28 processing steps, as well as partial realization of one of the six management requirements.

One processing step--which screens and authorizes the payment of medical bills--was computerized in most district offices in June 1978. Development of this subsystem started as a joint effort involving an ESA representative and PRC. However, we were told by an ESA official that the PRC staff was released because PRC's work was considered unacceptable. Accordingly, the final efforts on this subsystem were completed by an ESA staff person.

Another processing step--which locates a case in the claims processing cycle (case tracking)--was computerized in August 1978. This subsystem also partially satisfied one of the six management

requirements by providing information on the number of claims processed by district offices and on the time taken to process them.

The case tracking subsystem was developed by PRC and a subcontractor, Designetics, Inc. PRC initially developed the subsystem which worked; however, we were told that, in some instances, the amount of time to locate a case was considered unacceptable to ESA. Designetics was asked to reduce the time to locate a case. Under a \$50,000 fixed price amendment to an existing contract with Four Phase Systems, Inc., Designetics--working as a subcontractor--was able to reduce the time and the subsystem was implemented nationwide.

Developmental efforts are still in process under this second effort. For example, a refinement of the case-tracking subsystem referred to above was implemented in the Dallas District Office in February 1979. However, implementation in other district offices has been delayed, pending a cost-benefit analysis of the need for this refinement.

Although ESA has met with limited success in developing these subsystems, their ultimate use is in doubt. ESA officials have referred to these subsystems as interim measures until the third effort is completed. It has not been determined whether these subsystems will become part of the overall system called for in the third effort.

Third attempt

The third attempt is very similiar to ESA's first effort in that it is another attempt to develop an overall system to support administration of the FECA program. This third effort calls for a reevaluation of existing subsystems and development of a computer system to process claims and satisfy management requirements. The system called for in this third effort is somewhat smaller than the system originally anticipated under ESA's contract with PRC. The PRC contract called for all claims processing steps to be computerized, whereas under this third effort only the clerical processing steps will be computerized.

On March 31, 1978, ESA awarded a contract to the Mitre Corporation to define and design a total system. In December 1978 Mitre, (after it defined and designed the system) advised ESA that the system could not be implemented until calendar year 1980 and would cost between \$9 and \$13 million. In March 1979 an ESA official told us that, because the Mitre-estimated timeframe and cost for implementation of the system was considered unacceptable, the Mitre effort would be redirected. The ultimate direction of this third effort--which to date has cost about \$600,000--is still in doubt.

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I have summarized ESA's progress to date in developing a computer system to support the administration of the FECA

program. As can be seen, little progress has been made compared to what was anticipated over 5 years ago. I would like to now discuss what we believe are major deficiencies in ESA's management of its attempts to develop a computer system.

NO EFFECTIVE MANAGEMENT CONTROLS

It is very important that a contracting agency set up management controls to monitor performance during the development cycle to identify and deal with problem areas before they significantly impede progress. In our opinion, ESA did not set up sufficient management controls over its developmental efforts and, as a result, was unable to monitor progress and identify and deal with problems that arose during development of the claims processing computer system.

We found that ESA:

- Had not completely spelled out the steps to be performed in developing the system and had not set up realistic milestones against which to measure progress.
- Had not closely supervised the work of PRC to observe the progress being made.
- Did not build incentives into its contracts to help ensure delivery of an acceptable product in a timely manner.

--Has not placed responsibility for the development of the system under one person or organizational entity.

Insufficient development steps and unrealistic milestones

During the development of a computer system there are various steps which are usually performed sequentially. For example, those steps range from the initial one--defining user needs--to system programming and testing, to a final step called "post-implementation validation." These steps should be spelled out in a development contract and milestones set forth when each step is expected to be completed.

We found that ESA had not described the steps normally performed in a computer system development life cycle. In this regard, ESA tasked PRC, under a December 1978 amendment to an existing contract, to develop an administrative manual which, according to an ESA official, would include a description of normal steps to be followed in the development of a computer system. In March 1979 we were told that PRC had delivered a manual but that ESA considered it unsatisfactory.

In the initial contract with PRC, ESA did spell out some of the necessary development steps but did not attach realistic dates for completion of each step. For example, the original contract called for reports on completion of three major steps--conversion from the old system, system testing, and pilot testing--all on the same day. We believe that it is not only unrealistic to expect completion of these three steps on the

same day but that these reports should normally be delivered in sequence, one at a time, to allow management to make decisions on proceeding to the next step.

One technique used to monitor and control contractor performance is to establish milestones when each step in the development of a computer system should be completed, and to monitor whether the contractor meets these milestones.

It appears that ESA did not use the few milestones it had developed to monitor the progress of the project. The original milestones were never changed to reflect actual progress, even though the contract was amended several times and milestone dates slipped nearly a full year--from September 1975 to August 1976.

In March 1979 a PRC representative told us that, because neither PRC nor ESA had used life cycle development steps linked to milestones in order to monitor progress, it was not possible as late as May 1976--3 months before the system was to be implemented--for ESA or PRC to determine the status of the project.

Lack of close supervision

We believe that closer supervision and control over PRC's work would have alerted management earlier in the development process that the computer system was encountering problems.

The need for close supervision was recognized by ESA in the original May 1974 contract with PRC. However, the contract

was amended to require PRC to provide overall project management control and coordination of data conversion, system development, hardware installation, pilot testing, and full system implementation at all district offices. We were told by an ESA official that overall control was turned over to PRC because ESA had not assigned sufficient staff to adequately control the project.

ESA relied on PRC's progress reports throughout the development of the system. These progress reports optimistically indicated that work was progressing satisfactorily. The problems were not identified until the test failed in August 1976--more than 2 years after the developmental effort began.

Closer supervision could have led to earlier identification of system development problems and, as a result, avoided the negative impact that the pilot test failure had in the New York District Office. Also, closer supervision could have led to earlier indications that the initial developmental effort was too large to manage properly. A PRC official told us that, in retrospect, the project should have been reduced to manageable pieces so that components of the overall system could have been developed and tested separately.

Contracting methods provided little incentive

ESA used contracting methods that provided little or no incentive for the contractor to deliver an acceptable and

timely product. The use of these methods, along with the lack of milestones and close supervision, placed ESA in a position where it could exercise little control over contract performance.

For the most part, ESA has attempted to develop the computer system using labor hour contracts (under which payment to the contractors is based on incurred direct labor hours) or cost reimbursement contracts, subject to a specific ceiling. In most instances the contracts have been amended several times. Most of the amendments resulted in increasing the cost ceilings of the contracts. Because labor hour contracts lack any incentive for cost control by the contractor, they require constant Government surveillance. Therefore, the use of such contracts is restricted by the Federal Procurement Regulations to situations in which no other type of contract will serve the intended purpose.

ESA's original contract with PRC was for \$500,000 and was a labor hour contract. As part of this contract PRC was to provide a definition of the total claims processing computer system. We were unable to identify the precise date when the definition phase was completed by PRC, but it appears to have been completed by June 1975. Once definition was completed, ESA amended its original contract with PRC and authorized PRC to spend an additional \$400,000. Ultimately,

through a series of additional amendments, PRC received over \$2 million under this contract.

We believe that, after the system had been defined by PRC, ESA should have been in a position to clearly describe the scope of the total development effort. Accordingly, we believe it would have been more beneficial to the Government if ESA had attempted to award a fixed price or incentive type contract instead of amending its labor hour contract with PRC. In addition, we believe that ESA should have explored the possibility of obtaining competition, rather than amending its original contract.

Under the second effort, ESA again used mostly labor hour and cost reimbursement contracts and one small fixed price amendment to an equipment contract. The one firm fixed price amendment was to improve the case tracking subsystem developed by PRC under its original labor hour contract. The contractor was not paid until the case tracking subsystem was improved and tested to meet the acceptance criteria as called for by the contract. It was successful, and it is presently being used by all district offices.

The major contract under the third effort is a cost plus fixed fee contract with Mitre. This began as a one-month, \$20,000 contract and was amended four times increasing the total contract amount for FECA program system development up to over \$600,000.

Need for centralized
management of the project

ESA has failed to clearly assign responsibility for the project; this has led to duplication of work and the development of subsystems which may be incompatible with the complete system when it is developed.

The second and third efforts are in various stages of development. The second effort was the responsibility of ESA's Division of ADP Projects--until March 31, 1979, when responsibility was transferred to ESA's Division of Management Information and Computer Systems--and the third effort is under the direction of ESA's Division of Federal Employees' Compensation. Even though both of these efforts have similar goals, we found little evidence that the organizations involved were coordinating their efforts. Also, we were not able to locate a plan within ESA linking the products of these two efforts in any way.

We attempted to find out if any particular individual or organizational entity within ESA had responsibility for overall management of the developmental efforts, but we could find no one who appeared to have total responsibility for it.

In August 1976--after the failure of the first attempt to implement a system in New York--ESA recognized the need for centralized control for developing the system. Accordingly, ESA created the FEC Automation Policy and Operating Committee;

however, we were told by the vice chairman of this committee in March 1979 that the committee functioned only for a short period of time and has not been active since February 1977.

The lack of central management control within ESA has resulted in some duplication of effort. For example, Mitre did a complete user requirement study even though one had been previously done and was being used in the second effort by the Division of ADP Projects. There is some merit in determining whether user requirements have changed over time. However, this is normally done by testing--not by making another complete study. In this instance, because of a lack of coordination, the Division of Federal Employees' Compensation asked Mitre to, in effect, duplicate what the Division of ADP Projects had been doing for the past 2 years.

Also, one of the subsystems already implemented may not be compatible with what is planned under the Mitre effort. During a briefing given to ESA by the Mitre Corporation in December 1978, which we attended, Mitre stated that the current hardware utilized in the district offices should be replaced. Since the current software is unique to this hardware, any replacement would most likely require a conversion to make the existing subsystem compatible with what is being developed under the Mitre effort.

RECENT DOL INSPECTOR GENERAL REPORT

In March 1979, DOL's Inspector General issued a final report on its assessment of ESA's effort to develop a computer system to support its administration of the FECA program. The findings in the Inspector General report closely paralleled our findings. The report cited the following four specific deficiencies in ESA's effort:

"SYSTEM DEVELOPMENT

Four (4) years after the start of the FECA ADP project, only a small portion of the basic system is operational; the entire system is being redesigned and is not scheduled to be operational until FY 80.

"CONTRACTING AND PROCUREMENT

{ ESA management has not exercised sufficient contracting and procurement monitoring in its ADP contracting activity with respect to FECA.

"MANAGEMENT PRACTICES

ESA management has failed to effectively control and direct the ADP operations of FECA program. *automatic data processing*

"ECONOMY AND EFFICIENCY

ESA has not addressed the total costing of its FECA ADP operations." *development costs*

The Inspector General's report recommended that a complete impact analysis be done on the FECA computer system

before any further funding is approved for the system, and that this impact analysis consider the cost per transaction in the proposed system and the balancing of the outlays for capital and development costs against the current outlay for labor costs.

CONCLUSIONS

The evidence is overwhelming that ESA's efforts to develop a computer system for the administration of the FECA program have been plagued with problems and have suffered from a lack of management control and coordination. Even now there appears to be considerable doubt and confusion as to the future course of action this developmental effort will take.

Accordingly, based on our work to date we believe that the Secretary of Labor should direct the Assistant Secretary for ESA to place responsibility and authority for the overall direction of the system developmental effort on one person or organizational entity, *and*

Once responsibility is placed at an appropriate level, we believe that a cost-benefit analysis should be conducted, *to* assess whether a computer system for the FECA program is cost justified.

If it is determined that a ^{computer} total system--or additional subsystems--will be cost beneficial, ~~then~~ ESA should:

--Develop an overall plan detailing the direction

the project should take. > Particular attention should be given to identification of the steps to be performed and the establishment of realistic milestones against which the progress of the project can be measured.

--Use contracting methods that provide incentives to deliver an acceptable product.

--Monitor contractor performance closely. >

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Madam Chairwoman, this concludes my statement. We shall be happy to answer any questions that you or other members of the Subcommittee may have.