

GAO

Report to the Chairman, Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives

August 1987

ADP ACQUISITIONS

Lessons Learned From SEC's Edgar Pilot Test



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United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

B-222177

August 6, 1987

The Honorable John Dingell
Chairman, Subcommittee on
Oversight and Investigations
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

In your October 1, 1985, letter, you indicated that the Subcommittee remains concerned as to whether the Securities and Exchange Commission's (the Commission) Electronic Data Gathering, Analysis and Retrieval (EDGAR) system would meet its original program goals within its proposed time and budget limits. As agreed with your office, this is the second report in response to your request that we evaluate, monitor, and conduct a complete audit of the EDGAR pilot system, its procurement, and implementation (see appendix I). This report contains the results of our audit of the pilot project, highlighting lessons learned for the development and acquisition of an operational EDGAR system. It also contains a recommendation to the Commission Chairman to help ensure economical acquisition of automatic data processing (ADP) equipment for the operational system. Our first report identified issues the Commission should address prior to award of an operational system contract.¹

The EDGAR Program

In April 1984, the Commission awarded a 2-year contract for development of a pilot EDGAR system to test the feasibility of electronically receiving, processing, and disseminating to the public the millions of pages of documents companies file with the Commission each year. Based on the pilot system's results, the Commission issued a Request for Proposals (RFP) on May 7, 1986, for an operational EDGAR system. To develop and operate this system, the Commission plans to pay up to \$46.5 million over an 8-year contract period for that portion of the system used for internal Commission processing. In addition, the contractor chosen must fund development and operation of the dissemination portion of the system, recovering such costs plus a reasonable profit by selling "filing" information to subscribers at Commission-regulated fees. The RFP closed on February 27, 1987; the contract award is scheduled for July 1987.

¹ADP ACQUISITION: SEC Needs to Resolve Key Issues Before Proceeding With Its EDGAR System (GAO/IMTEC-87-2, Oct. 9, 1986)

Questions and Answers

As agreed with your office, our audit primarily addressed questions raised in our March 14, 1985, testimony before the Subcommittee,² and other specific Subcommittee concerns. These questions and concerns are outlined below along with summaries of our responses. Detailed responses and our audit objectives, scope, and methodology are provided in appendix II.

1. What was the cost of the pilot system compared to original contract cost?

The Commission awarded the EDGAR pilot contract to Arthur Andersen and Company on April 30, 1984; the finalized cost of the contract was \$8.6 million. Over the life of the contract, expenditures increased by over \$2.1 million or 25 percent to a total of \$10.8 million at contract expiration on April 30, 1986.³ Increases in contract price were generally due to additional equipment and requirements such as an upgrade to the pilot computer for approximately \$222,000 and adding the Investment Management Division and other offices to the pilot project for about \$369,000. In addition to the original pilot contract cost, about \$2.3 million of other EDGAR-related costs were incurred by the Commission; this resulted in total costs of about \$13.1 million at contract expiration. By September 30, 1986, total project cost had increased to about \$15.0 million. Operation of the pilot system will continue at an estimated \$215,000 per month until transition to an operational system contractor (See pp. 19 to 21.)

2. Did the Commission meet its original schedule for pilot system development?

The Commission generally adhered to timeframes estimated in the original contract for design and development of the EDGAR pilot system. The first phase of the contract was completed in September 1984, as planned. Schedule estimates for other phases of the contract were revised as system specifications were further developed, but these phases were completed prior to contract expiration in April 1986. (See pp. 21 and 22.)

²Statement of James R. Watts, Senior Group Director, Information Management and Technology Division, General Accounting Office, on the Securities and Exchange Commission's Electronic Data Gathering, Analysis and Retrieval (EDGAR) System, March 14, 1985.

³Final adjusted contract price through modification 30 dated September 30, 1986

3. What functions were actually developed in the pilot system compared to original requirements for the system?

With a few exceptions, the functions and capabilities specified as requirements in the original contract were developed in the EDGAR pilot system, and some additional functions were added as the pilot project progressed. The contract specified functions and capabilities to be developed in each of the three contract phases. Phase 1 provided the Commission with an initial capability to accept electronic filings both by direct transmission over telephone lines and by magnetic tape or diskette; to review filings from workstations; and to disseminate the filings electronically to the Commission's public reference rooms and by computer tape to the dissemination contractor to produce microfiche. Phase 2 added functions that allowed Commission staff to search a filing for a particular word or string of characters (known as text search), automatically assign a filing to an examiner, and select related documents that were incorporated by reference within a filing. More functions were added in Phase 3, including the ability to automatically construct a financial profile (i.e., to calculate ratios) within a filing, to automatically apply selective review criteria,⁴ and to provide a tickler and watch service to notify Commission staff when certain events occur. The pilot also showed that some originally planned EDGAR functions would not be economical and were, therefore, not developed. In our opinion, these capabilities were not critical EDGAR functions. (See pp. 22 to 24.)

4. What functions remain to be developed in the operational system?

Three key functions initially tested in the pilot require further development and/or testing of new technical solutions for the operational EDGAR system: this could increase the time and cost for full system development. These functions are: receipt and acceptance processing, "data tagging," and text searching for keywords. One other key function—image processing—has been eliminated from the operational system, but may be added if advances in technology make the function cost-effective.

Receipt and acceptance processing for the operational system are to provide an automated means to verify that electronic filings have been formatted correctly and contain certain identifying information. Because pilot filers committed errors or failed to comply with certain requirements during the pilot, Commission staff generally had to contact

⁴Such as financial ratios used by the Commission to identify filings where examination is most warranted.

these filers directly to resolve the problems. The Commission plans to develop capabilities in EDGAR to minimize the need for an increase in support staff to accommodate the increase in filers expected in the operational system (an increase from 178 to 13,500 filers in the Corporation Finance Division alone). These capabilities would simplify electronic filing and would electronically notify filers of receipt and acceptance problems. If they are not successfully developed or implemented, the Commission's support staff needs may greatly exceed its estimates, thus offsetting planned EDGAR benefits. (See p. 25.)

Another key developmental function, "data tagging," concerns alternative approaches to identifying various financial data within a filing so the EDGAR computer system can automatically recognize the data and calculate a number of different financial totals and ratios. These calculations are key to allowing EDGAR, rather than Commission staff, to quickly screen filings and identify those that will most likely require further review and analysis by Commission staff to determine compliance with securities laws and regulations. The Commission now plans to shift the burden of tagging from EDGAR to the filers—a major change in EDGAR's original concept. Filers have indicated objections to this approach and could oppose its implementation. Without the tagging of financial data, the screening of filings to identify those warranting further review cannot be fully automated; therefore, benefits to the Commission from this automation may not be realized. Furthermore, should the Commission select a vendor whose approach filers find objectionable, the vendor could incur and pass on to the Commission both the costs to develop software for a data tagging approach that is not used and additional costs to revise or rewrite the software for another approach. (See pp. 25 and 26.)

For the third developmental area—text searching for keywords—the Commission concluded that the software package used in the pilot to search the EDGAR data base for filings containing specific words, groups of words, and synonyms is not adequate for the operational environment. The Commission believes that other commercially available packages can provide this capability for the operational system. However, the pilot approach proved unacceptable for only 35 Commission workstations and about 123,000 pages of filings (at expiration of the original pilot contract). For the operational EDGAR system, workstations will increase to 448, the annual filing volume is projected to reach 9.6 million pages by fiscal year 1989, and some 43.8 million pages of information are to be stored on EDGAR by fiscal year 1993. Given these projections

and the pilot development experience, developing a responsive and efficient text search capability for the operational system could require more development effort and expense than the routine application of a software package the Commission anticipates. (See pp. 26 and 27.)

Finally, the ability to accept electronically such items as graphs, charts, and pictures—image processing—has been eliminated from the operational EDGAR system, but may be added in the future if more cost-effective technical solutions become available. The RFP provides a mechanism to incorporate new technology, the additional cost of which would be negotiated with the contractor. (See p. 27.)

5. Was there a potential conflict of interest with Arthur Andersen and Company as pilot contractor, given the nature of its other business activities?

After evaluating the proposals of four companies, the Commission awarded the EDGAR pilot contract to Arthur Andersen and Company. Awarding the pilot contract to this company does not give rise to an organizational conflict of interest under the Federal Acquisition Regulation (48 C.F.R §9.501). However, the award of the pilot contract to a public accounting firm does present the appearance of a conflict of interest. Because of this, the Commission has taken precautions such as requiring Arthur Andersen and Company and its employees to sign non-disclosure statements to protect the agency's interests. In our opinion, this action provides a measure of protection for the Commission's interests because it provides the Commission with a legal basis for taking action against any contractor employee who discloses or utilizes confidential or non-public information in an unauthorized manner. In addition, we are not aware of any law or regulation that requires the Commission to exclude public accounting firms from competing for this type of contract. (See pp. 27 and 28.)

6. Were the Commission's contract administration practices adequate for the pilot project?

Our audit indicated several weaknesses in the Commission's contract administration practices for the pilot project. First, in reviewing formal modifications to the pilot contract, we found delays between the date when the modifications became effective and the date they were formally signed by the contractor and the contracting officer (finalized). Second, we found little or no analysis of pilot contractor invoices prior to Commission payment. Third, we found limited monitoring of the Mitre

Corporation contract for contract performance or contract deliverables. The Commission has taken some corrective actions to strengthen its contract administration practices for the operational system contract. These actions include hiring additional contract staff, assigning a full-time attorney to the EDGAR project, and including other contract administration requirements in the operational system RFP. The Commission has also begun organizing and staffing an Office of EDGAR Management that will address contract administration weaknesses. (See pp. 29 to 32.)

7. Should the Commission have obtained a delegation of procurement authority for the pilot project?

Commission officials did not believe that regulations requiring a specific delegation of procurement authority (DPA) applied to the EDGAR pilot contract, and therefore, did not request a DPA from the General Services Administration (GSA). However, we believe, and GSA officials agree, that these regulations apply to the pilot system and a DPA should have been obtained. This is because the procurement involved acquisition of commercially available ADP equipment and met the dollar thresholds for a DPA. Eventually, the Commission, despite its earlier position that procurement regulations did not apply to the pilot and operational systems, submitted an agency procurement request to GSA for the operational system. On March 26, 1986, GSA granted a DPA. The Commission also requested a subsequent DPA for the operational system based on its revised RFP. GSA granted this DPA on September 30, 1986. (See pp. 32 to 34.)

8. To obtain the lowest prices for pilot system ADP equipment, should the Commission have conducted a separate procurement and furnished this equipment to the contractor?

The Commission's acquisition strategy for the pilot system called for the contractor to provide the Commission with over \$2 million in commercially available ADP hardware, software, and services (ADP equipment) during the 2-year contract period through a subcontractor—International Business Machines Corporation (IBM). The Commission did not consider it operationally feasible to sever the procurement of this ADP equipment from the contract to provide it as government-furnished equipment, and its decision is consistent with criteria provided by procurement regulations. However, while the agency was not required to sever the procurement, the pilot contract permitted the contractor to obtain this ADP equipment at prices in the GSA schedule contract for IBM equipment. GSA schedule contract prices do not necessarily represent the

best prices available for a major system acquisition. Thus, the Commission's approach provided little assurance that the lowest reasonable prices were obtained. Further, if the Commission permits the winning vendor for the operational system contract to charge GSA schedule contract prices, the Commission again may not obtain the lowest reasonable prices. (See pp. 35 to 37.)

9. What was the Mitre Corporation's actual technical assistance role for pilot system development?

Since the EDGAR project's inception, the Mitre Corporation provided technical assistance to the Commission such as helping develop the pilot system RFP, evaluating the pilot system, and providing input for the operational system RFP. As indicated in the Commission's testimony in the March 1985 hearings before your Subcommittee, the Mitre Corporation provided expertise not available to the Commission in-house particularly regarding system sizing, use of available technology, and technical evaluation. However, our audit showed that there were changes in this company's technical assistance role, and the Commission did not fully utilize technical assistance available from the Mitre Corporation. The Commission did not use the Mitre Corporation to evaluate the pilot contractor's proposed technical approach or estimated cost of system development work. Although we found no indication of pilot system problems directly related to the absence of such evaluations, we believe they are necessary to help ensure cost reasonableness and development of an effective, efficient system. The Mitre Corporation's contract was not funded beyond fiscal year 1986. Instead, the Commission plans to obtain additional technical expertise for the operational system through an agreement with GSA's Federal Computer Performance Evaluation and Simulation Center. (See pp. 37 to 39.)

10. Did Arthur Andersen and Company apply the technical expertise necessary to develop original requirements for the EDGAR pilot project?

In its response to the pilot system RFP, Arthur Andersen and Company included a staffing plan for the project that the Commission accepted in awarding the contract to this company. As a result, the pilot contract specifically identified the name and title of six key contractor personnel considered essential to the work being performed. Our review of staff qualifications for these positions and for other general project staffing indicated that Arthur Andersen and Company had appropriate technical qualifications to develop the original requirements of the EDGAR pilot system. The pilot contract also required that any changes in contract

participation by personnel in the six key positions must be approved in writing by the Contracting Officer prior to the change. Our review showed that these positions were generally staffed throughout the contract, but that changes did occur in terms of individuals and required positions. The contractor obtained approval for staffing changes through discussions with the EDGAR Contracting Officer and his technical representative, but the Contracting Officer did not document his approval in writing as required by the contract. We found no indications that changes in key position staff adversely affected contract performance. (See pp. 39 and 40.)

11. Where in the Commission are decisions made on the development and modification of the EDGAR system?

Major decisions for the EDGAR program are made by the Chairman and commissioners of the Securities and Exchange Commission, and have included approval of temporary rules and regulations to permit electronic filing for the pilot system and release of the RFP for the operational system. The Commission Chairman also regularly receives briefings by EDGAR staff on the technical and policy issues of the program such as project schedules, system size, use of EDGAR throughout the Commission, fee structures for dissemination, and funding approaches. In addition, according to Commission officials, authority to authorize procurement of the pilot system was specifically delegated to the Commission's Executive Director; the day-to-day technical, budgetary, and contractual decisions regarding changes or enhancements for the pilot system are made by the Deputy Executive Director as Contracting Officer for the pilot contract. (See pp. 40 and 41.)

Conclusions

Overall, the experience the Commission gained from the EDGAR pilot should prove very useful to the success of the planned operational system. The pilot demonstrated the technical feasibility of electronic filing, processing, and, to a limited extent, the dissemination of filings to the public. However, it also disclosed some key areas—automatic receipt and acceptance, data tagging, text searching, and image processing—that still require new or revised technical solutions if EDGAR is to achieve its full potential and expected benefits.

From a contractual perspective, the pilot was generally developed according to the original schedule, and with some exceptions, the contractor met all original contractual requirements. However, there were weaknesses in acquisition and contract administration practices that

need to be avoided during the acquisition and development of the future EDGAR system. In awarding the contract for the operational system, the Commission needs to ensure that it pays the lowest reasonable prices available for ADP equipment.

As we pointed out in a letter to you on April 24, 1987 (see appendix III), EDGAR can be successfully developed, but only if the Commission has the proper technical, contractual, and managerial talent to handle a project of the size and complexity of the proposed operational EDGAR system. The Commission agrees and is hiring staff with this talent; however, the Commission needs to have some key people in place before awarding a contract for the operational system.

Recommendation to the Commission Chairman

We recommend that the Chairman of the Securities and Exchange Commission direct the Contracting Officer for the operational EDGAR procurement to ensure that the price of contractor-furnished ADP equipment is specifically negotiated prior to contract award to obtain the lowest reasonable cost to the government.

Agency Comments and Our Evaluation

We provided a draft of this report to the Commission, which provided its comments in discussions with our staff and in a written response (included as appendix IV). The Commission agreed with our findings, conclusions, and recommendation, and noted actions taken in direct response to our guidance. In particular, the Commission stated that it has implemented the recommendation to negotiate the price of contractor-furnished ADP equipment prior to contract award by having GSA's Federal Computer Performance Evaluation and Simulation Center assess the bidders' ADP equipment and software prices. In addition, the Commission stated that during contract execution it will have an independent consultant evaluate prices of ADP hardware and software prior to purchase. Regarding costs to develop software for data tagging, the Commission said that it notified bidders of a stipulation that no funds can be expended by the contractor for data tagging until the filers have been given the opportunity for review and comment and the Commission has approved an approach based upon this input. Finally, as part of its efforts to establish an organizational structure and to obtain the proper managerial, technical, and contractual talent needed to soundly manage the EDGAR project, the Commission noted that it has selected an EDGAR Project Manager, who began work on July 13, 1987. Further, the Commission is also in the process of selecting a head of its new Office of EDGAR Management.

We evaluated comments provided through discussions with Commission staff and made minor technical corrections to the report as appropriate. In addition, we also evaluated actions initiated by the Commission and believe that, while continued action is needed for full implementation, the actions properly respond to our recommendation and the other concerns outlined in the report.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution until 30 days from the date of the report. At that time, we will send copies to the Chairman of the Securities and Exchange Commission; the Chairmen, Senate and House Committees on Appropriations, House Committee on Government Operations, and Senate Committee on Governmental Affairs; Director, Office of Management and Budget; and other interested parties; and will make copies available to others upon request.

Sincerely yours,

A handwritten signature in cursive script that reads "Ralph V. Carlone".

Ralph V. Carlone
Director

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Abbreviations

ADP	automatic data processing
DPA	delegation of procurement authority
EDGAR	Electronic Data Gathering, Analysis and Retrieval
FIRMR	Federal Information Resources Management Regulation
GAO	General Accounting Office
GSA	General Services Administration
IBM	International Business Machines Corporation
RFP	Request for Proposals
SEC	Securities and Exchange Commission

Request Letter

NINETY-NINTH CONGRESS

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CHIEF COUNSEL, STAFF DIRECTOR

U.S. House of Representatives
Subcommittee on Oversight and Investigations
of the
Committee on Energy and Commerce
Washington, DC 20515

October 1, 1985

The Honorable Charles A. Bowsher
 Comptroller General
 General Accounting Office
 441 G Street, N.W.
 Washington, D.C. 20548

Dear Mr. Bowsher:

In February 1985, the Subcommittee on Oversight and Investigations requested that the General Accounting Office review the Securities and Exchange Commission's (SEC) development, procurement and implementation of the Electronic Data Gathering, Analysis and Retrieval system (EDGAR). The GAO's review of the EDGAR system revealed serious deficiencies. Messrs. James Watts, Melroy Quasney and Anthony Cicco of the Information Management and Technology Division testified about these problems at the Subcommittee's March 14, 1985 hearing regarding the EDGAR system. This GAO testimony was invaluable in assisting the Subcommittee in identifying problem areas and preparing an authorization report concerning the EDGAR system.

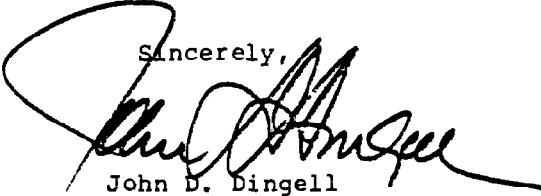
The Subcommittee remains concerned that the EDGAR system will not meet its original program goals within the time and budget limits proposed by the SEC. Because of its concern that the EDGAR project be handled in the appropriate manner, the Subcommittee requests that the GAO evaluate, monitor and conduct a complete audit of the EDGAR system, as well as its procurement and implementation, at the conclusion of the pilot program and report its findings to the Subcommittee.

Should you have any questions regarding this request, please contact R.C. Norwood or John Chesson of the Subcommittee staff at 225-5365.

The Honorable Charles A. Bowsher
October 1, 1985
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Thank you for your assistance with the work of the
Subcommittee.

Sincerely,



John D. Dingell
Chairman
Subcommittee on
Oversight and Investigations

JDD:RCN/sf

Responses to Questions About the EDGAR Pilot Test

The EDGAR Program

To fully disclose material business and financial information for use by investors, federal securities statutes generally require companies to file registrations, proxy statements, and other periodic and annual reports with the Securities and Exchange Commission (the Commission). For example, before offering securities to the public, the Securities Act of 1933 requires companies to file registration statements that provide information including a description of the offering, its price, the use of proceeds, and the registrant's business. The filing process for these required registrations and reports—"filings"—generally consists of companies' delivering multiple copies of paper documents to the Commission.

The Commission receives these filings, verifying that: the correct number of copies is received, authorized signatures are present, any required filing fees have been paid, and the filing format is correct. Filings that pass this receipt and acceptance processing are distributed to the public in the Commission's public reference rooms and to the appropriate Commission division for review. Once in the divisions, some filings are subject to an initial review or "screening" to identify those where a full review is most warranted. Others, like a company's first registration statement, may automatically receive a full review.

With filing volumes increasing and totaling some 5.4 million pages in 1982, the Commission's Chairman initiated, in 1983, a long-range program to upgrade the Commission's data processing capabilities. Part of this program included exploration of a "paperless" filing and processing system that resulted in the EDGAR (Electronic Data Gathering, Analysis and Retrieval) program. According to the Commission, the primary purpose of EDGAR is to increase the efficiency and fairness of the securities markets for the benefit of investors, corporations, and the economy by accelerating dramatically the filing, processing, dissemination, and analysis of time-sensitive corporate information.

Because of the complexity of developing an electronic filing and processing system, the Commission decided that a pilot system would provide the opportunity to gain experience and to test various approaches with different types of computer hardware and software. In April 1984, the Commission competitively awarded a 2-year, cost-plus-fixed-fee contract for development of a pilot system to Arthur Andersen and Company; International Business Machines Corporation (IBM) was a subcontractor. In April 1986, this original contract expired, and the Commission awarded a sole-source contract to the pilot contractor to

continue operating and maintaining the pilot system until transition to the contractor for the operational system.

On May 7, 1986, the Commission issued a request for proposals (RFP) to develop the operational EDGAR system. This RFP required that offers be submitted by September 10, 1986, with contract award scheduled to take place within 120 days of that date. The Commission later extended the offer submission date to December 31, 1986, to consider comments received from potential bidders and others. On October 30, 1986, the Commission reissued the RFP incorporating changes ranging from the contract type and funding approach to the potential system architecture. According to the revised RFP, the Commission plans to pay up to \$46.5 million over an 8-year contract period to develop and operate portions of the system for the Commission's receipt, acceptance, and review of filings. In addition, the contractor itself must fund development and operation of a portion of the system that will provide (disseminate) filing information to subscribers. The contractor would recover the costs for this portion of the system plus a reasonable profit by selling this information at Commission-regulated fees.

After release of the revised RFP and at the request of potential offerers, the Commission further extended the offer submission date for the RFP to February 27, 1987. The Commission received proposals in response to the revised RFP and is currently evaluating them for planned contract award in July 1987.

Objectives, Scope, and Methodology

On October 1, 1985, the Chairman, Subcommittee on Oversight and Investigations, House Committee on Energy and Commerce, requested that we evaluate, monitor, and conduct a complete audit of the EDGAR system, including its procurement and implementation, at the conclusion of the pilot program. In this request, the Subcommittee indicated its concern that EDGAR would not meet its original program goals within the Commission's proposed time and budget limits. (See appendix I.)

Subcommittee concern for the EDGAR program surfaced in its hearing on the EDGAR system in March 1985. We testified about deficiencies in the Commission's development, procurement, and implementation of the pilot system.¹ As agreed in an October 16, 1985, meeting at your office,

¹Statement of James R. Watts, Senior Group Director, Information Management and Technology Division, General Accounting Office, on the Securities and Exchange Commission's Electronic Data Gathering, Analysis and Retrieval (EDGAR) System, March 14, 1985.

our audit primarily addressed issues we raised in our testimony and Subcommittee concerns identified during this meeting.

As agreed in a June 25, 1986, meeting at your office, we are reporting the results of our audit in two parts. On October 9, 1986, we issued an initial report highlighting specific concerns that we believe the Commission and potential vendors should consider prior to award of the contract for the operational system. Our concerns were the: implementation of EDGAR's electronic filing requirements, appropriateness of the proposed financing approach for the operational system, and reasonableness of cost/benefit estimates.

One objective of this second part of our work was to evaluate the EDGAR pilot project through its completion to respond to specific Subcommittee questions and concerns regarding the actual capabilities developed for the pilot system and the procurement and overall management of the pilot project. A second objective was to monitor Commission efforts to procure an operational EDGAR system.

We conducted our audit at the Commission's headquarters in Washington, D.C., from November 1985 to June 1986. We primarily evaluated pilot system development through expiration of the original pilot contract on April 30, 1986. However, we also updated EDGAR program cost data through the end of fiscal year 1986, and continued to monitor the Commission's RFP for operational EDGAR through its closing on February 27, 1987. We conducted this audit in accordance with generally accepted government auditing standards.

We interviewed Commission officials and EDGAR program staff in the Office of the Executive Director, the Corporation Finance and Investment Management divisions, the Office of Applications and Reports Services, and the Procurement and Contracts Branch. We also interviewed EDGAR project staff from Arthur Andersen and Company and the Mitre Corporation. In addition, in reviewing the Commission's compliance with federal procurement regulations, we also interviewed officials of the General Services Administration's (GSA) Office of Information Resources Management.

To determine the functions in operation for the pilot system, we observed EDGAR project staff receiving and reviewing filings, reviewed

²ADP ACQUISITION: SEC Needs to Resolve Key Issues Before Proceeding With Its EDGAR System (GAO/IMTEC-87-2, Oct. 9, 1986).

EDGAR workstation functions available through the end of the pilot development contract. We also analyzed progress reports by the Commission's EDGAR project staff and by the pilot contractor, as well as evaluation reports prepared on the pilot system by the Mitre Corporation and by the pilot contractor.

In reviewing the Commission's contract administration practices and automatic data processing (ADP) equipment acquisitions, we obtained and analyzed the original EDGAR pilot contract and the 30 formal modifications to the contract. We also reviewed selected pilot contractor invoices, particularly for the original equipment purchased for the pilot system.

As part of our audit, we analyzed the original May 7, 1986, RFP for the operational system to determine the functional requirements for the system, the proposed financing approach, and other specific provisions relating to contractor cost recovery and incorporation of new technology. We also reviewed the revised RFP issued October 30, 1986, to identify any changes to original RFP provisions.

Our Responses to Subcommittee Questions

In discussing your request during an October 16, 1985, meeting at your office, we agreed that our audit would address questions raised in our March 14, 1985, testimony before the Subcommittee and Subcommittee concerns identified during the meeting. These questions are presented below along with our responses.

1. What was the cost of the pilot system compared to original contract cost?

Awarded initially as a letter contract on April 30, 1984, the Commission and the pilot contractor, Arthur Andersen and Company, later finalized the contract for the EDGAR pilot project at a 2-year cost of \$8.6 million including \$1.1 million for an option to purchase or "buy out" pilot ADP equipment at the end of the contract. Over the life of the contract, expenditures increased a net amount of over \$2.1 million or 25 percent to a final, adjusted price of \$10.8 million at contract expiration on April 30, 1986. We reviewed modifications to the contract and found that, in general, increases in price resulted from additional equipment and requirements for the pilot project such as:

**Appendix II
Responses to Questions About the EDGAR
Pilot Test**

- an upgrade to the pilot computer in November 1984 at a cost of approximately \$222,000 (not including any additional cost to purchase this equipment at the end of the contract);
- office automation demonstrations in other elements of the Commission to refine technical requirements for the operational system at a cost of some \$240,000;
- addition of the Investment Management Division and other offices to the pilot project for about \$369,000; and
- development of additional functions for the third of three pilot project development phases at a cost of approximately \$408,000.

In addition to the cost of the original pilot contract, the Commission incurred about \$2.3 million of other EDGAR-related costs for a total pilot project cost of about \$13.1 million at contract expiration. The additional costs included ADP equipment furnished by the Commission, technical support work provided by the Mitre Corporation, and the cost of Commission staff directly assigned to the project. From expiration of the pilot contract to the end of fiscal year 1986, the Commission incurred an additional \$2.0 million for the pilot system, bringing the total project cost to \$15.0 million. The most significant of these additional costs was about \$1.5 million paid to Arthur Andersen and Company under a follow-on contract to operate and maintain the pilot system.

Table II.1 summarizes costs of the EDGAR pilot project.

**Appendix II
Responses to Questions About the EDGAR
Pilot Test**

**Table II.1: Cost of EDGAR Project at
Pilot Contract Expiration and as of
September 30, 1986**

	Cost in thousands
Project Cost as of contract expiration, April 30, 1986	
Arthur Andersen and Company pilot contract	\$10,765 ^a
ADP equipment furnished by the Commission	466
Technical support by Mitre Corporation	741
Market study by Mathematica Policy Research, Inc	64
Review of RFP for operational EDGAR by International Data Corporation	10
Commission staff	918 ^b
Commission staff non-personnel cost (e.g., supplies, space)	95 ^c
Subtotal as of April 30, 1986	\$13,059
Project Cost from May 1 to September 30, 1986	
Arthur Andersen and Company pilot extension contract	\$1,509
Technical support by Mitre Corporation	68
Technical support by the Federal Computer Performance Evaluation and Simulation Center	19 ^d
Review of RFP for operational EDGAR by International Data Corporation	5
Commission staff	310
Commission staff non-personnel cost	67
Subtotal May 1 to September 30, 1986	\$1,978
Total EDGAR Project Cost at September 30, 1986	\$15,037

^aAdjusted final contract amount through contract modification 30, signed 9/30/86.

^bBased on actual staff years for fiscal years 1985 and 1986 for staff assigned directly to the EDGAR project. Costs of other staff such as the Deputy Executive Director (EDGAR Contracting Officer), division management, or administrative offices are not maintained for or apportioned to the project.

^cThe Commission did not allocate this cost to the project prior to fiscal year 1986.

^dAmount actually billed the Commission for fiscal year 1986.

Cost for the pilot system will continue until transition to an operational system contractor. The follow-on contract with Arthur Andersen and Company costs an estimated \$215,000 per month. In addition, on September 29, 1986, the Commission increased the price of this contract to upgrade the pilot system computer. This upgrade, intended to allow the pilot system to handle more filings, began in January 1987, and was completed in March at an estimated cost of about \$235,000.

2. Did the Commission meet its original schedule for pilot system development?

The Commission generally adhered to timeframes estimated in the original contract for design and development of the EDGAR pilot system. Some

original estimates were revised as system specifications were further developed, but these changes essentially did not affect contract timeframes.

The finalized pilot contract established a performance period not to exceed 24 months from the April 30, 1984, date of original contract award. It also established three phases for design and development of the pilot system with estimated timeframes for each. Phase 1 was scheduled to be completed in the first 5 months of the contract, and was to provide an initial capability to receive electronic filings and to process these filings at workstations. During the next 7 months, Phase 2 was to add functions and enhance capabilities for EDGAR workstations. Phase 3 was to comprise the final 12 months of the contract and test additional concepts for the operational system.

Phase 1 was completed as scheduled, with the first electronic filings received on September 24, 1984. With development of functional specifications for Phase 2, the estimated timeframe for this phase was increased from 7 to 9 months. Correspondingly, the Phase 3 timeframe was reduced from 12 to 10 months to coincide with required contract completion on April 30, 1986. Both these phases were completed according to the revised schedules.

3. What functions were actually developed in the pilot system compared to original requirements for the system?

With a few exceptions, the functions and capabilities specified as requirements in the original contract were developed in the EDGAR pilot system, and some additional functions were developed as the pilot project progressed. According to the contract, specific functions and capabilities were to be developed in each of the three contract phases. The results of development efforts for each phase are summarized below.

Phase 1 functions were developed and essentially delivered with the receipt of the first "live" filings on September 24, 1984, a week prior to the estimated completion date for this phase. This phase provided the Commission with an initial capability to accept electronic filings by direct transmission over telephone lines, by magnetic tape, or by diskette. It also permitted the Commission to disseminate the filings electronically to the public reference rooms, and by computer tape to the dissemination contractor to produce microfiche. In addition, Commission staff could review filings from workstations. That is, they could select filings by registrant name or filing identification number, display them,

access any portion of a filing, and include their comments and annotations without these notes being disseminated publicly.

During Phase 2, several changes on the development and delivery of functions occurred. As discussed previously, the completion date for this phase was extended by 2 months from (April 30 to June 30, 1985). Consequently, some functions—such as searching a filing for a particular word or string of characters (text search), automatically assigning a filing to an examiner, and selecting related documents that were incorporated by reference within a filing—were delivered at the revised Phase 2 completion date. During Phase 2, the pilot contractor delivered some functions throughout the phase. For example, the capability to select a filing based on filing type, date of receipt, and effective date was provided as of December 1, 1984; electronic communications between examiners was provided as of January 31, 1985.

Other functions that were to be developed during Phase 2 were deferred to Phase 3. These included automatically constructing a financial profile (calculating ratios) within a filing, automatically applying selective review criteria,³ and providing a tickler and watch service to provide notification to Commission staff when certain events occur. Finally, image processing (receiving and storing electronic representations of graphs, charts, maps, and pictures in the EDGAR data base) received limited testing in Phase 2. Because this process proved too costly with current image processing technology, the Commission decided to eliminate it from the operational system.

One original Phase 2 function was not provided during the pilot. This function, checking the arithmetic within a filing, was to assist in the review process by computing items such as totals, subtotals, differences, percentages, means, and ratios. However, to check filing arithmetic, EDGAR must either be able to recognize financial data within the filing or have someone such as the filer identify or "tag" such data for the system. Difficulties in resolving how this "data tagging" would be done resulted in deferring development of this function. (See pages 25 and 26 for additional discussion of the data tagging issue.)

Despite shortening Phase 3 by 2 months to compensate for extending Phase 2, actual implementation of Phase 3 functions occurred on April 14, 1986, 2 weeks before the April 30 expiration of the contract. At that

³Such as financial ratios used by the Commission to identify filings where examination is most warranted.

time, original Phase 3 requirements such as increasing text search capabilities to include synonyms and refining selective review criteria were implemented. In addition, the Phase 2 functions deferred to Phase 3 were also implemented. Two original Phase 3 capabilities were not provided: displaying a filing in typeset and increasing text search capabilities to include alternative spellings. Pilot experience indicated that developing these capabilities would be possible, but not cost-effective. To display a filing in typeset, the Commission would have had to dictate a standard format for typeset documents or design the system to accept all typesetting formats. Text search for alternative spellings would have required additional work to create a dictionary to identify alternative spellings. In our opinion, neither of these two capabilities is a critical EDGAR function. The Commission has not included them in operational system requirements.

In addition to original contract requirements, some additional functions were provided during the pilot project. For Phase 1 these included providing a test environment for filers to test electronic filing before submitting a "live" filing and the ability to highlight changed material in a filing. In Phase 2 these included capabilities to create an index to all documents that relate to a particular filing or registrant (electronic file folder), to construct an electronic worksheet (screening sheet) to assist in performing selective review, and to provide access to EDGAR for securities agencies in three states (California, Georgia, and Wisconsin). For Phase 3, additional EDGAR functions were developed to provide automatic notification of filers when a filing has been received, and use of a commercial electronic mail service to provide notification when a filing is accepted.

4. What functions remain to be developed in the operational system?

As indicated above, the pilot determined the feasibility of many of the functions proposed for the operational EDGAR system. However, three key functions planned for the operational system—receipt and acceptance processing, "data tagging," and text searching for keywords—still require development and testing of new technical solutions and could, therefore, increase the time and cost of full system development. Another key function—image processing—has been eliminated from the operational EDGAR system, but may be added in the future if more cost-effective technical solutions become available.

Receipt and Acceptance Processing

Before electronic filings are accepted by the Commission and disseminated to the public, they—like documents filed on paper—must undergo receipt and acceptance processing by Commission staff to check for such things as correct format for the type of filing, proper signatures, and fee payment. In addition, to be received by the EDGAR system, electronic filings must be formatted correctly and contain certain identifying information. Because filers commit errors or fail to comply with certain requirements, Commission staff generally have to contact filers directly to resolve the problems. According to a February 1986 analysis of EDGAR internal benefits, the Commission estimates that support staff to handle these problems would increase from 4 staff years in fiscal year 1986 to a maximum of 21 staff years for the operational system. The Commission's fiscal year 1988 budget estimate increases the filer support level to 24 staff years. However, these staff years represent an increase of only 6 times the fiscal year 1986 level, while the number of filers for the Corporation Finance Division alone will increase about 75 times (from 178 at the original pilot contract expiration to about 13,500 filers estimated in the operational system). To minimize support staff needs for the operational system, the Commission plans to develop capabilities in EDGAR to simplify electronic filing and electronically notify filers of receipt and acceptance problems—capabilities not developed during the pilot. If these capabilities are not successfully developed or implemented, the Commission's support staff needs may greatly exceed its estimates, thus offsetting planned EDGAR benefits.

Data Tagging

"Data tagging" is the term the Commission uses to describe alternative approaches to identifying, or tagging, various financial data within a filing so that the EDGAR computer system can automatically recognize the data and then calculate a number of different financial totals and ratios. These calculations are key to allowing EDGAR, rather than Commission staff, to quickly screen filings and identify those that will most likely require further review and analysis by Commission staff to determine compliance with securities laws and regulations.

As discussed in our October 1986 report, during the pilot the Commission evaluated several approaches to data tagging. One was a limited experiment in which filers tagged data for EDGAR by submitting an additional financial data schedule with certain filings. The Commission anticipates that this additional financial data schedule, or a similar approach with filers tagging the data, will be used for the operational system. However, shifting the burden of tagging from EDGAR to the filers is a major change in EDGAR's original concept, and commenters on the

Commission's advance notice of proposed rulemaking for electronic filing requirements have indicated an objection to this approach. Commenters note that completing an additional schedule of financial information is not that difficult, but they object to using such a schedule because it could freeze the form of financial statements and inhibit meaningful disclosure. They also note that it does not provide for filers' individual interpretation of accounting rules and does not consider that additional data may be available in footnotes. In addition, they are particularly concerned about disseminating this schedule to the general public, even though it could be extremely valuable to the operational system contractor and other potential subscribers to EDGAR information.

Without the ability to tag financial data, the screening of filings to identify those warranting further review cannot be fully automated; therefore, internal benefits to the Commission associated with this automation may not be realized. Furthermore, should the Commission select a vendor whose approach filers find objectionable, the vendor could incur and pass on to the Commission both the costs to develop software for a data tagging approach that is not used and additional costs to revise or rewrite the software for another approach. Therefore, the data tagging approach remains a developmental risk for the operational system.

Text Searching for Keywords

During the pilot, the Commission used a commercially available software package to search the EDGAR data base for filings containing specific words, groups of words, and synonyms. Based on pilot experience of only 35 Commission workstations and about 123,000 pages of filings (at expiration of the original pilot contract), the Commission concluded that this software package was not adequate for the operational environment. Reasons cited were poor response times for searches (5 to 10 minutes) and the amount of space needed to store the index of keywords used for searching (an amount equivalent to about 88 percent of that required for the filings themselves). The Commission believes that other commercially available packages can provide this capability for the operational system. However, for the operational system, the number of Commission workstations will increase to 448; the annual filing volume is projected to reach 9.6 million pages by fiscal year 1989; and some 43.8 million pages of information are to be stored on EDGAR by fiscal year 1993. Given these projections and the pilot development experience, we believe that developing a responsive and efficient text search capability for the operational system could require more development effort and

expense than the routine application of a software package the Commission anticipates.

Image Processing

The pilot included experimentation with image processing—a capability the Commission would use primarily to electronically store and display companies' annual reports to stockholders that contain charts, graphs, maps, and photographs. This experiment indicated that image processing technology needed substantial improvement before it would be considered cost-effective for EDGAR; as a result, it was not included as a requirement for the operational system. However, although it was not required, both the Commission and users of EDGAR information want to have annual reports to stockholders included in the EDGAR data base. Including annual reports in the EDGAR data base could increase its marketability for dissemination purposes. For these reasons, it is likely that the Commission will propose incorporating an image processing capability later in the operational system contract. The RFP provides a mechanism to do so: the additional cost would be negotiated with the contractor.

5. Was there a potential conflict of interest with Arthur Andersen and Company as pilot contractor, given the nature of its other business activities?

The Commission awarded the EDGAR pilot contract to Arthur Andersen and Company after evaluating the proposals of four companies. The use of Arthur Andersen and Company as pilot contractor does not result in an organizational conflict of interest under the Federal Acquisition Regulation (48 C.F.R. §9.501). However, using a public accounting firm as the contractor does present the appearance of a conflict of interest, for which the Commission has taken precautions to protect its interests.

The Federal Acquisition Regulation prescribes the general rules for identifying, evaluating, and resolving "organizational conflicts of interest." Specifically, an organizational conflict of interest exists when the nature of the work to be performed under a proposed government contract may, without some restriction on future activities, result in an unfair competitive advantage to the contractor or impair the contractor's objectivity in performing the contract work. However, these regulations do not explicitly address the situation presented by the EDGAR pilot contract.

In this project, the contractor assists the Commission in operating the internal system and has access to Commission procedures used in reviewing corporate filings, such as selective review criteria used to help identify those filings that will receive further review. A public accounting firm has clients that are required to file with the Commission. Using such a firm as the EDGAR contractor creates concern that knowledge of Commission review procedures could be used for private purposes or would unfairly benefit the firm in its other business practices because of a perception that it has access to such information. Despite this concern, in our opinion, the use of a public accounting firm does not specifically result in an unfair competitive advantage or impair the firm's objectivity, particularly given the restrictions the Commission imposed on the contractor and its staff.

The Commission recognized that contract award to Arthur Andersen and Company created an appearance of a conflict of interest. Therefore, to reduce the risk of this potential conflict's materializing, the Commission required both Arthur Andersen and Company and each of its employees assigned to the EDGAR project to agree in writing not to divulge confidential or non-public commercial, economic, or official information (for example, selective review criteria) to any unauthorized person or to release such information in advance of specific authorization. Under these agreements, contractor employees are bound by the same statutes and regulations applicable to Commission officials concerning the use of non-public Commission information or documents. Further, these agreements give the Commission a legal basis for acting against any contractor employee who disclosed or utilized confidential or non-public information in an unauthorized manner.

In our opinion, the agreements provide a measure of protection for the Commission's interests. In addition, we are not aware of any law or regulation that would require the Commission to exclude public accounting firms from competing. To the contrary, we have held that firms generally should not be excluded from competing on the basis of a theoretical or potential conflict of interest.⁴ We have also held that responsibility for making the determination whether a firm has a conflict of interest and to what extent a firm should be excluded from competing rests with the procuring agency; this determination is overturned only when shown to be unreasonable.⁵

⁴Exotech Systems, Inc., 54 Comp. Gen. 421 (1974), 74-2 CPD §281

⁵NKF Engineering, Inc., 65 Comp. Gen. 104 (1985), 85-2 CPD §338

6. Were the Commission's contract administration practices adequate for the pilot project?

Our audit indicated several weaknesses in the Commission's contract administration practices for the pilot project. First, in reviewing formal modifications to the pilot contract, we found delays between the date the modifications became effective and the date they were formally signed by the contractor and the contracting officer (finalized). Second, we found little or no analysis of pilot contractor invoices prior to payment by the Commission. Third, we found limited monitoring of the Mitre Corporation contract for contract performance or contract deliverables. The Commission has taken some corrective actions to strengthen its contract administration practices for the operational system contract.

Delays in Finalizing Contract Modifications

The Commission documented changes to the pilot contract through a total of 30 formal contract modifications. In reviewing these modifications, we identified 12 that changed contract requirements and increased cost. Of these, 9 were finalized from 2 to 12 months after the effective date that the contractor initiated performance. Further analysis showed that for some of these, work was completed before modifications were finalized. For example:

- Modification 8 increased the contract price by about \$290,000 to permit the contractor to upgrade the pilot system computer from an IBM 4341 to an IBM 4381. Although the upgrade was installed in November 1984, the contract modification was not finalized until March 1985, some 5 months later.
- To fund development of additional functions for Phase 3 of the EDGAR project, the Commission executed modification 25, increasing the contract price by about \$732,000.⁴ While indicated as effective October 1, 1985, this modification was not finalized until over 6 months later on April 14, 1986, the date that actual Phase 3 functions were implemented for the pilot system.

The Federal Acquisition Regulation does not specify a time limit for finalizing contract modifications, but does require contracting officers to negotiate equitable adjustments resulting from change orders in the shortest practicable time (48 C.F.R. Para. 43.204(b)). According to the

⁴This amount was ultimately reduced by about \$325,000, which remained unexpended at contract expiration, April 30, 1986.

pilot contract, the estimated contract cost and funding for contract performance cannot be increased except by specific written modification to the contract. Moreover, until the contract is formally modified, the contractor is not obligated to continue performance or incur costs beyond the estimated cost set forth in the contract. As a result, the pilot contractor was concerned about modification delays and discussed this problem with Commission officials. To prevent delays, the contractor continued to perform the additional work the Commission requested. As indicated above, in some instances, work was essentially completed by the time modifications were finalized. However, a contractor official for the project explained that as a result of this situation, there were times when he was unsure whether or not to stop work until the contract was modified.

Commission officials acknowledged delays in finalizing contract modifications and attributed them to: the difficulty of some changes and the time-consuming paperwork associated with them; grouping of several changes into one modification; staff turnover in its Procurement and Contracts Branch; and poor communication between EDGAR project staff and the Procurement and Contracts Branch in preparing modifications. Our audit confirmed that some modifications required extensive documentation and that, in some cases, several changes were grouped in one modification. It also showed that, during the pilot project, the Procurement and Contracts Branch experienced a complete turnover of staff including the branch chief who had served as the prime contract specialist for the pilot contract and who represented a large part of the Commission's institutional knowledge of the contract. He departed in January 1986. Commission officials have acted to improve contract administration including the contract modification process. These actions are discussed on page 32.

Little Invoice Analysis Performed

Under the EDGAR pilot contract, the Contracting Officer's technical representative was specifically responsible for reviewing and approving contractor invoices. However, we noted that such reviews were generally not performed prior to invoice approval; this official stated that he does not prepare a formal analysis and documentation of his review. Instead, he explained that he approved contractor invoices based primarily on his knowledge of the project, and that any variances between invoice amounts and GSA prices authorized by the contract could be detected through a post-contract audit.

Such an audit is being conducted and while it could help identify differences between contract and actual quantities and prices, it provides little assurance during contract performance that payments are made to the contractor only as authorized by the contract. For example, we found that the pilot contract authorizes a 14-percent finance charge for ADP equipment and service charges incurred by the contractor until payment by the Commission. The Contracting Officer's technical representative stated that he reviewed contractor invoices for reasonableness, but was unaware that the finance charge was included in billing amounts. In addition to this example, the Commission's Office of Internal Audit performed a limited review of contractor billings for 24 of the 30 modifications to the pilot contract. It found two procedural errors for invoice payments. One involved a duplicate payment for \$20,000 made for the software license for the special-purpose computer used in the pilot's artificial intelligence experiments. The expense was billed both separately and as a part of a monthly charge. The resulting \$20,000 overcharge to the Commission has since been credited to the Commission. A second error concerned a contract modification that authorized \$240,000 for an EDGAR-related office automation demonstration project. Instead, the contractor incurred a cost of \$250,000 for this modification, and negotiated payment of this amount with the Commission. Therefore, the amount of the negotiated payment exceeded the amount authorized by the contract. We believe that procedural errors (1) could be detected through routine analysis of contractor invoices, including comparison to amounts authorized by the contract and (2) will be increasingly important for the operational system procurement for which the Commission plans to pay up to \$46.5 million.

Limited Monitoring of Mitre Corporation Contract

The Mitre Corporation provided technical assistance not available within the Commission for the EDGAR project. The Commission detailed the type of assistance to be provided in specific contract tasks and deliverables.

In attempting to determine the type of assistance the Mitre Corporation actually provided, we contacted the Contracting Officer's technical representative responsible for ensuring that the contractor performs contract technical requirements and for inspecting and accepting deliverables. This official stated that neither he nor anyone else monitored the contract to identify which Mitre Corporation products fulfilled which contract tasks. Even when we identified specific products provided by the Mitre Corporation (such as technical memoranda for pilot system design and a document related to pilot system evaluation), this

official could not say with any certainty whether these related to specific contract tasks.

Corrective Actions Taken

The Commission has acted to improve contract administration practices for the pilot project. In December 1985, it hired a contract administration specialist to work full-time monitoring the pilot contract. Previously, no one had specific responsibility for the contract on a full-time basis. In addition, in May 1986, the Commission assigned an attorney to the EDGAR project full-time. Tasks for this attorney include reviewing and comparing contractor invoices to contract requirements, preparing budget and management reports, and serving as a contract liaison between EDGAR project officials and the Commission's Office of the Comptroller.

In addition, the RFP for the operational system shows that the contract will contain other measures to help ensure proper payment amounts to the contractor. For example, to justify monthly payments by the Commission for its portion of the system, the contractor will be required to submit monthly reports with expenditures structured to facilitate comparisons of current expenses to annual and project budgets. These reports must also identify and allocate any costs of equipment, staff, or services shared by more than one subsystem. Further, the contractor's operations will be reviewed annually by an independent accounting firm in connection with regulation of dissemination charges. This will include a review of any and all other contract activities related to EDGAR to ensure that costs of services are properly apportioned between the regulated and unregulated activities and, if applicable, between all subsystems.

In March 1987, the Commission also began organizing and staffing a newly created Office of EDGAR Management to manage the development and operation of the operational system. This office will be headed by the Contracting Officer's technical representative for the operational system contract and will include a contract administration branch. Responsibilities of this branch will include negotiating contract changes, reviewing and analyzing invoices, and reviewing contractor resource allocation and usage.

7. Should the Commission have obtained a delegation of procurement authority for the pilot project?

To provide for economic and efficient purchase, lease, and maintenance of commercially available ADP equipment by federal agencies, the Brooks Act (40 U.S.C. §759 (1982)) gives GSA exclusive federal purchasing authority. GSA has implemented its authority by publishing regulations that define ADP equipment and establishing procedures for obtaining delegations of its procurement authority.⁷ When an agency needs to acquire ADP equipment, these procedures require, among other things, that it submit a documented request for a specific delegation of procurement authority (DPA). Without a GSA-approved DPA, an agency lacks the authority to acquire the ADP equipment.

Commission officials did not believe that regulations requiring a DPA applied to the EDGAR pilot contract, and therefore, did not request one from GSA. However, we believe, and GSA officials agree, that these regulations are applicable to the pilot system, and a DPA should have been obtained.

In a March 1985 memorandum, the Commission's General Counsel explained the Commission's position for not requesting a DPA. Essentially, he stated that, according to Section 201-1.103(b)(3) of the Federal Information Resources Management Regulation (FIRMR), when the subject matter of a contract is for something other than contracting for ADP resources, agencies should not require contractors to apply policies and procedures of these regulations even though commercially available ADP resources are used in contract performance. He went on to say that contracts for both the pilot and operational systems are for something other than ADP resources—a filing and dissemination system primarily involving contractor services. Further, the ADP equipment merely provides the means to supply the services. He concluded that these regulations were not applicable. Based on this position, the Contracting Officer for the EDGAR pilot believed that a DPA was not required.

In contrast to the Commission's position, we believe that the EDGAR pilot system included ADP equipment subject to the FIRMR and the Brooks Act, even if acquired as part of a contract for non-ADP equipment and services. In its RFP for the pilot system, the Commission required offerers to furnish an IBM 4341 or plug-compatible mainframe equivalent, including

⁷Such regulations were contained in the Federal Procurement Regulations at the time of EDGAR pilot contract award on April 30, 1984, but were incorporated into the FIRMR effective May 17, 1984.

a disk controller, tape drives, printers, front end processors, workstations, terminals, and software for operating this equipment and for communications. This is clearly "ADP equipment" that procurement regulations define as general-purpose, commercially available, mass-produced ADP devices (i.e., components and the equipment systems configured from them together with commercially available software packages). This definition also includes auxiliary equipment, such as word processing equipment and devices used to control and transfer data. We have recognized that ADP equipment ordinarily subject to the Brooks Act does not fall outside the scope of the act just because it is acquired along with or as part of a contract for non-ADP equipment and services.⁴ Since the Commission was acquiring commercially available ADP equipment as part of the pilot procurement, it was required to procure this equipment in accordance with the Brooks Act and applicable regulations, including the DPA requirement. Our discussions with GSA officials further confirmed this interpretation of the FIRMR for the EDGAR pilot system.

GSA has established blanket DPAs where prior approval from GSA is not required—if the price of the ADP equipment does not exceed certain dollar thresholds (a purchase price of \$2.5 million or basic monthly rental charges less than \$1.0 million annually). Our opinion is that the ADP equipment acquisition for the pilot system was subject to procurement regulations, so we applied these thresholds and found that the pilot procurement included leasing fees for ADP equipment that were initially estimated to be about \$1 million per year. Specifically, a cost estimate prepared by Arthur Andersen and Company and provided to the Commission a month prior to contract award estimates that the ADP equipment leasing costs would be about \$2 million over the 2-year contract period. This estimate also showed that an additional \$395,000 in ADP equipment would be purchased during contract performance.

Accordingly, we believe the Commission should have obtained a DPA for the pilot system. Despite the Commission's earlier position that the FIRMR was not applicable to the pilot and operational systems, the Commission did submit an agency procurement request to GSA for the operational system, and on March 26, 1986, GSA granted a DPA. In revising the operational system RFP for release in October 1986, the Commission requested a DPA for this revised acquisition strategy. GSA granted this DPA on September 30, 1986.

⁴Plus Pendetur Corp., et al., 85 Comp. Gen. 258 (1986), 86-1 CPD § 107.

8. To obtain the lowest prices for pilot system ADP equipment, should the Commission have conducted a separate procurement and furnished this equipment to the contractor?

The Commission's original acquisition strategy for the pilot system called for the pilot contractor to provide the Commission with over \$2 million in commercially available ADP hardware, software, and services (ADP equipment) during the 2-year contract through a subcontractor—IBM. Because of its development approach for the pilot system, the Commission did not consider it operationally feasible to sever the procurement of ADP equipment—that is, to conduct a separate procurement and provide this equipment to the contractor as government-furnished equipment. The Commission's rationale for not severing the procurement is consistent with criteria provided in the FIRMR, and GSA officials agree that requirements for full and open competition were satisfied by the pilot system procurement.

However, while the agency was not required to sever the ADP equipment procurement for the pilot, the pilot contract authorized the contractor to furnish ADP equipment at GSA schedule contract prices for IBM equipment. According to GSA and a private industry consultant, GSA schedule contract prices do not necessarily represent the best prices available for a major system acquisition. As a result, the Commission did not ensure that it obtained pilot system ADP equipment at the lowest reasonable prices. Further, unless the Commission specifically negotiates ADP equipment prices for the operational system contract, the use of GSA schedule contract prices could be continued, and the Commission cannot ensure that it will obtain the lowest reasonable prices for its planned acquisition.

**Severing ADP Equipment
Procurement Not Required**

As discussed previously, the Commission considered the pilot system as something other than acquisition of commercially available ADP items or services. Therefore, according to the FIRMR (§201-1.103(b)(3)), even if some of these items or services are to be delivered under the contract, their acquisition is not subject to these procurement regulations. However, this regulation also states that to ensure full and open competition in such cases, agencies shall sever the procurement of commercially available ADP equipment or services when it is operationally feasible to do so and this action will promote economy and efficiency (§201-24.202(a)). This section also provides the following criteria for when an agency should consider severing the procurement: (1) the item or service can be identified as a separate line item; (2) the value of the ADP portion

exceeds \$500,000; (3) the items can be acquired by the government and delivered to the contractor as required by the production schedule; (4) adequate price competition can be achieved on the severed ADP portion; (5) the expected cost reduction will exceed the added costs of acquisition; and (6) severing the ADP equipment or services will not affect the contractor's ability and responsibility to perform as required by the contract.

Although the decision was not formally documented, Commission officials stated that severing the procurement of ADP equipment for the pilot system was not considered operationally feasible and would hinder the contractor's ability to develop the system in a timely manner. The Commission used a system integration approach for the pilot; the contractor specified computer hardware and software as part of its solution to system requirements. Therefore, as one Commission official explained, equipment could not be provided by the Commission prior to the selection of a contractor because the type and quantity of equipment were unknown. He added that, on the other hand, if the Commission waited until after the contractor is selected to obtain equipment, the lengthy procurement process would delay contractor development efforts.

Similar to the pilot, the Commission does not plan to sever the ADP equipment procurement for the operational system contract. The Commission has formally documented this decision, citing reasons similar to those for the pilot and consistent with criteria in the FIRMR. Specifically, like the pilot procurement, the Commission will use a system integration approach for operational system development—an approach approved by GSA in granting the Commission a DPA. As a result, the Commission justifies not severing the ADP equipment procurement because specific equipment needs will be unknown until contract award. According to the Commission, this leaves insufficient time for it to conduct a separate procurement and still meet milestones established for start-up operation of the system.

Because of GSA's approval of the system integration approach for the operational system, we contacted GSA officials to discuss the severability issue for both the pilot and operational system procurements. These officials stated that since selection of a system integrator for either the pilot or the operational system is made through competition, regulatory requirements for full and open competition are satisfied and the ADP equipment procurements need not be severed.

Use of GSA Schedule Contract
Prices Does Not Ensure Lowest
Reasonable Price

For the pilot system contract, the contractor provided more than \$2 million in ADP equipment, the software to operate this equipment, and maintenance at GSA schedule contract prices. Schedule contract prices for government lease, purchase, and maintenance of ADP equipment and software are negotiated each fiscal year by GSA with various manufacturers and distributors. However, GSA officials acknowledge that prices contained in these schedule contracts are not the lowest prices obtainable for a major system procurement, and are often considered ceiling prices at best. They also said that they would expect any federal contracting officer of a major ADP equipment acquisition to question a bidder's proposed use of schedule prices. In addition, the FIRMR (§201-32.206(a)(2)) states that if responsible alternative sources are available, the availability of items under a GSA schedule contract does not preclude or waive the requirement to seek the lowest overall cost alternative to meet the needs of the government.

As part of our audit, we attempted to ascertain if lower prices were available for pilot system ADP equipment. Because the pilot contract was awarded more than 3 years ago, we could not identify specific lower prices that then might have been available. However, our discussions with GSA officials and a private industry consultant on federal ADP equipment procurements indicated lower prices are obtainable. As a result, we believe that if during negotiation, the Commission had required contractors to determine if GSA schedule contract prices were the best prices obtainable, this might have resulted in a lower cost to the government.

While we discussed the use of GSA schedule contract prices with Commission officials prior to initial release of the operational system RFP in May 1986, the RFP does not contain any specific instructions for offerers on using such prices in cost proposals. For this reason, the Commission must rely on the negotiation process to help ensure that ADP equipment for the operational system is provided at the lowest reasonable cost to the government.

9. What was the Mitre Corporation's actual technical assistance role for pilot system development?

The Mitre Corporation provided technical assistance to the Commission since the early stages of the EDGAR project; that included helping develop the pilot system RFP, evaluating the pilot system, and providing input for the operational system RFP. As indicated in the Commission's March

1985 testimony before your Subcommittee,⁹ the Mitre Corporation provided expertise not available to the Commission in-house—particularly regarding system sizing, use of available technology, and technical evaluation. However, our audit showed that there were changes in the Mitre Corporation's technical assistance role, and the Commission did not take full advantage of technical assistance available from this company.

As part of its task to evaluate the EDGAR pilot system during its operation, the Mitre Corporation was to provide written evaluations to address the: (1) development of experiments to test the pilot; (2) evaluation of the experiments developed and run using the pilot; (3) potential of the pilot to meet full operational system requirements; (4) overall performance of the pilot; (5) lessons learned for the concept of operation of the operational system; (6) limitations of the technology demonstrated in the pilot; and (7) additional system and technical requirements needed to make the pilot system the operational system. The deliverable for this task was specified as monthly memoranda starting in June 1984.

The initial Mitre Corporation pilot evaluation memorandum in June 1984 noted a disagreement with the pilot contractor about implementing specifications developed by the Mitre Corporation. According to the Mitre Corporation, subsequent to the delivery of this memorandum, the EDGAR Contracting Officer's technical representative informed the Mitre Corporation that this evaluation requirement applied only to the actual operation of the pilot system, not to its development. Therefore, monthly evaluation memoranda were not to begin until the first electronic filing in September 1984. However, no further monthly evaluation memoranda were submitted, and a modification to the Mitre Corporation contract dated May 13, 1985 (indicated as effective January 19, 1985) formally deleted the requirement for these memoranda. In his March 1985 testimony, the EDGAR Contracting Officer's technical representative acknowledged that he should have required the monthly evaluation memoranda for the September to December 1984 period, but failed to follow up and obtain them.

Although the Mitre Corporation's evaluation role changed in that it did not provide periodic evaluations of the pilot system through monthly

⁹SEC: Oversight of the EDGAR System, Hearing Before the Subcommittee on Oversight and Investigations, Committee on Energy and Commerce, House of Representatives, 99th Congress, 1st Session, March 14, 1985, Serial No. 99-23.

evaluation memoranda, it did complete its evaluation tasks by producing two overall evaluation reports for the pilot. The first of these pertained to the pilot system through Phase 2 system development and was issued in January 1986. The second included Phase 3 of the pilot and was issued September 30, 1986. In addition, the Mitre Corporation also participated in bi-weekly meetings of the pilot project management committee (a group that helped guide the project and represented EDGAR users' interests). However, because no minutes or summaries of these committee meetings were prepared, we were unable to document any other evaluation input the Mitre Corporation provided through participation on this committee.

As discussed above, the Mitre Corporation's evaluation role was to address pilot system operation, not system development. The Commission did not use the Mitre Corporation to evaluate the pilot contractor's proposed technical approach or estimated cost of system development work—an area, noted a pilot contractor official, of limited Commission expertise. Although we found no indication of pilot system problems directly related to the absence of such evaluations, we believe the evaluations are necessary to help ensure both development of an effective, efficient system and cost reasonableness.

The Mitre Corporation's contract was not funded beyond fiscal year 1986. Instead, the Commission plans to obtain additional technical expertise for the operational system through an agreement with GSA's Federal Computer Performance Evaluation and Simulation Center.

10. Did Arthur Andersen and Company apply the technical expertise necessary to develop original requirements for the EDGAR pilot project?

As part of its response to the pilot system RFP, Arthur Andersen and Company included a project staffing plan that the Commission accepted in awarding the contract to this company. As a result, the pilot contract specifically identified the name and title of six key contractor personnel considered essential to the work being performed. Our review of staff qualifications for these positions and for other general project staffing indicated that Arthur Andersen and Company had appropriate technical qualifications to develop the original requirements of the EDGAR pilot system.

The pilot contract identified six key contractor positions for the EDGAR project—project director, project manager, technical support manager,

technology integration manager, application system development manager, and user support group manager. We reviewed the resumes of the original staff assigned to these positions, and those of additional staff assigned to the positions during contract performance. This review indicated that contractor staff managing the EDGAR project had appropriate qualifications for their positions. For example, the project director was an Arthur Andersen and Company partner who had previous experience in managing the design and installation of automated systems for the government and private companies. Also, the project manager assigned in August 1985 (originally the technology integration manager for the project) had a degree in information science, had additional training from Arthur Andersen and Company and external sources, and had considerable experience in the design and implementation of other automated systems.

The pilot contract also required that any changes in contract participation by those in the six key positions be approved in writing by the Contracting Officer prior to the change. Our audit showed that these positions were generally staffed throughout the contract, but that changes did occur in terms of individuals and required positions. These changes included replacement of the project manager and the assignment of new managers for user support and for application system development. We found no indications that these changes adversely affected contract performance. However, while the contractor obtained approval for staffing changes through discussions with the EDGAR Contracting Officer and his technical representative, we found no written approval by the Contracting Officer as required by the contract.

In addition to our review of key contractor personnel, we also reviewed selected resumes for other contractor staff assigned to the EDGAR project. These resumes also indicated that pilot contractor staff had appropriate technical expertise for the EDGAR pilot project.

11. Where in the Commission are decisions made on the development and modification of the EDGAR system?

Major decisions for the EDGAR program are generally made by the Chairman and commissioners of the Securities and Exchange Commission, but some approval authority for development of the EDGAR pilot system was delegated to the Commission's Executive Director. Formal decisions by the commissioners for the EDGAR program have included approval of temporary rules and regulations to permit electronic filing for the pilot

system and release of the RFP for the operational system. The decision-making process typically includes formal transmittal of documents to the commissioners for their review and approval, and can also include briefings by Commission staff to provide background information and explanation of issues involved. Commissioners' decisions are then recorded through a formal vote at a Commission meeting or, if joint deliberation is not considered necessary, by reporting their vote to the Commission Secretary. In addition to this formal process for major decisions, the Commission Chairman is also regularly briefed by EDGAR staff on the technical and policy issues of the program such as project schedules, system size, use of EDGAR throughout the Commission, fee structures for dissemination, and funding approaches.

The Executive Director develops and executes the overall management policies of the Commission for all its operating divisions and staff divisions, and also has the authority to enter into contracts, to designate contracting officers, and to make procurement determinations. According to Commission officials, authority to authorize procurement of the pilot system was specifically delegated to the Executive Director. In addition, the Deputy Executive Director, as Contracting Officer for the pilot contract, makes day-to-day technical, budgetary, and contractual decisions regarding changes or enhancements for the pilot system.

Letter to the Chairman on SEC Actions in Response to Our Prior Report

GAO

United States
General Accounting Office
Washington, D.C. 20548

Information Management and
Technology Division

B-222177

April 24, 1987

The Honorable John Dingell
Chairman, Subcommittee on Oversight
and Investigations
Committee on Energy and Commerce
House of Representatives

Dear Mr. Chairman:

This letter documents our understanding of the actions the Securities and Exchange Commission (the Commission) plans to take to comply with the recommendations in our recent report, ADP ACQUISITIONS: SEC Needs to Resolve Key Issues Before Proceeding With Its EDGAR System (GAO/IMTEC-87-2; Oct. 9, 1986). Since our report was issued, we have had numerous meetings with Chairman Shad and Commission staff to further discuss our position and to better understand the actions the Commission has taken or plans to take to address our concerns. As you recall, we concluded in the report that the Commission was proceeding with its operational Electronic Data Gathering, Analysis and Retrieval (EDGAR) system without first addressing some key policy, legal, and managerial issues that we have been concerned with since we began our study of the project in March 1985, and are still concerned with today. Accordingly, we recommended that the Commission not award a contract for the operational system until

- the impact of potential filer exemptions from and opposition to proposed electronic filing requirements has been fully assessed and considered in defining the system;
- the financing approach for the operational system has been resolved with the Congress to provide appropriate funding for the Commission's internal processing requirements; and
- a comprehensive cost/benefit analysis that better estimates the total costs of the internal system and its quantitative benefits and adequately describes

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the qualitative benefits of EDGAR has been completed.

The Commission concurs with our conclusions and recommendations and has agreed to take additional steps to address each of our areas of concern. While these steps, which are described in detail below, should resolve the issues discussed in our report, we believe that all but one--obtaining filer comments on data tagging--needs to be completed prior to awarding the operational EDGAR system contract.

As with any large, technically complex project, the operational EDGAR system will still have some developmental risks, and we believe the key to success is proper project management. The Commission agrees that it does not currently have all of the managerial or technical talent needed for EDGAR, and is in the process of acquiring this additional expertise. Nevertheless, the Commission is proceeding with the award of the operational contract, which we believe should not be done until at least the key members of the project's management team are on board.

The Commission's Actions to Address Our Recommendations

On March 11, 1987, we met with your staff, staff from the cognizant House authorizing and appropriation committees,¹ and Commission officials to discuss the status of the Commission's actions on our report's recommendations. At that meeting, Commission officials assured your staff and us that the Commission is in agreement with our recommendations, and described the actions they had taken or planned to take in order to comply with our report. Our understanding of the Commission's actions to date and the additional steps the Commission has agreed to take are documented below.

Filer Comments

Since June 1986, the Commission has received 103 comments from various filers, and organizations representing many filers, in response to an advance notice of proposed rules

¹ House Energy and Commerce Committee's Subcommittee on Telecommunications, Consumer Protection, and Finance; and House Appropriations Committee's Subcommittee on Commerce, Justice, State, the Judiciary, and Related Agencies.

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for the operational EDGAR system. Acting in part upon these comments, the Commission revised its original Request for Proposals (dated May 7, 1986) to make it easier for filers to file electronically. These changes should reduce some of the opposition to, and thus the number of possible requests by filers for exemption from, the electronic filing requirements the Commission plans to mandate on all filers --a concern that we had in our report.

However, one electronic filing requirement--data tagging--is not yet resolved. Data tagging is the generic term used by the Commission to describe alternative approaches to identifying, or tagging, various financial data within a filing so that the EDGAR computer system can automatically recognize the data, and then calculate a number of different financial totals and ratios. These calculations are key to allowing EDGAR, rather than Commission staff, to quickly screen filings and identify those that will most likely require further review and analysis by Commission staff to determine compliance with security laws and regulations.

The data tagging solution could well encounter filer opposition. During the EDGAR pilot phase the Commission experimented with an approach in which EDGAR, using special programs and hardware (generally referred to as artificial intelligence techniques), would automatically tag the data. On the basis of this experiment, the Commission determined that this approach was not economically feasible for the operational system. As an alternative, the Commission experimented briefly with another approach in which it requested filers to manually tag data as part of their submissions. As a result of this approach, the Commission has required vendors to propose alternatives that require filers to tag the data. Shifting the burden of tagging from EDGAR to the filers is a major change in EDGAR's original concept. Thus, we believe it is important to get filer reactions to the data tagging approach that will be used in the operational EDGAR system.

Comments received to date from filers show that they have reservations about the alternate data tagging approach used in the pilot phase. While filers find that tagging data, for instance, completing an additional schedule of financial information, is not that difficult, they object to using such a schedule. Filers have complained that this schedule could establish a new form of financial statement, it does

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not provide for filers' individual interpretation of accounting rules, and it does not consider that additional data may be available in footnotes. In addition, they are particularly concerned about disseminating this schedule to the general public, even though this information could be extremely valuable to the operational system contractor and other potential subscribers to EDGAR information.

Without the ability to tag financial data, the screening of filings to identify those warranting further review cannot be fully automated, and, therefore, internal benefits to the Commission associated with this automation may not be realized. Furthermore, if a vendor's approach is selected that filers find highly objectionable, this selection could cause the vendor to incur and pass on to the Commission unnecessary costs for developing and/or revising software that is dependent upon data tagging. Therefore, the data tagging approach remains a developmental risk for the operational system and needs to be resolved as quickly as possible.

By taking the following steps, the Commission can resolve this issue:

- Obtain filer comments on the winning vendor's tagging approach as quickly as possible and before the vendor proceeds with developing software that is dependent upon the data tagging solution.
- If filer opposition to the vendor's approach turns out to be significant and the Commission drops or substantially reduces its data tagging requirements, assess the impact these changes will have on EDGAR's costs and benefits, and report this information to congressional authorizing and appropriation Committees.

The Commission agrees that data tagging is very important for the success of EDGAR, and has stated that it will follow the steps outlined above.

Funding

In our report, we concluded that the receipt function should be considered part of the Commission's internal processing system, and that the cost for developing and operating this system should be paid from appropriated funds. The Commission has, in its revised Request for Proposals,

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increased the amount of funds expected to be appropriated for the internal system from \$35 million to \$46.5 million, and has stated that these additional funds will be used to pay the costs of the internal processing, including the receipt system, up to the limits of available funds. At the March 11, 1987, meeting, the Commission stated that, on the basis of an initial review of the bids received for the operational system, it believes the \$46.5 million in funding will be adequate for these purposes except for a potential shortfall that could occur in the 7th and 8th year of the contract (that is, 1993 and 1994). The Commission believes this shortfall could be reduced through negotiations of best and final offers, and also believes it can obtain approval for any additional funds in the later years of the contract. As stated in our report, we continue to believe that the receipt system should be funded through appropriations. However, we also believe the Commission could fund some of the costs of the receipt system through user fees if those costs arise solely because of the dissemination purposes of the system. It is our expectation this funding would be a relatively small portion of total system costs. If the Commission decides to fund any portion of the receipt system from user fees, it should clearly disclose to the Congress its rationale and basis for apportionment.

At our meeting, the Commission agreed to fund the receipt system with appropriations and to notify the congressional authorizing and appropriation Committees of any changes in its funding needs or in the method of financing the receipt portion of the operational EDGAR system.

Cost/Benefit Analysis

Our report concluded that the Commission had not properly determined EDGAR costs and benefits for the internal portion of the operational system. To better determine these costs, the Commission has recently contracted with the General Services Administration's Federal Computer Performance Evaluation and Simulation Center (FEDSIM) to perform a comprehensive cost analysis of the entire EDGAR system, and to assess the cost validity of vendors' proposals in light of this cost estimate. FEDSIM's final report was delivered to the Commission on April 17, 1987. While we have not been able to review this report in detail, we have reviewed FEDSIM's methodology, and have determined that this report should overcome our concern about the Commission's cost estimates for the operational EDGAR system.

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As for the benefits of EDGAR, the Commission analyzed its planned internal benefits from EDGAR and was able to estimate quantifiable benefits of about \$21 million.² While these quantifiable benefits are less than the \$46.5 million in funding currently requested for the operational system, the Commission has stated that the primary beneficiaries of EDGAR will be the investors, filers, and the economy, not just the Commission, and that these benefits, which cannot be easily quantified, far outweigh the cost of the operational system. We still believe that the Commission needs to better articulate for the Congress how each of these primary beneficiaries will benefit from EDGAR. This information, the previously quantified internal benefits, and the cost estimates now being developed by FEDSIM should then be submitted to the authorizing and appropriation Committees to assist them in their deliberations on the further authorization and funding of EDGAR.

At the March 11, 1987, meeting, the Commission agreed to prepare such an analysis and will provide it to the congressional authorizing and appropriation Committees.

EDGAR's Success Depends on Proper Management

The EDGAR pilot project has demonstrated that the concept of electronic receipt, review, and dissemination of corporate filings is possible, and the Commission has learned a number of lessons about the possible technical approaches for performing these functions. The Commission has also learned that there will be risks in developing the operational EDGAR system, many of which we have highlighted in our report, and in the March 11, 1987, meeting. It is impractical to expect any large, technically complex effort, such as EDGAR, to be risk free; however, the key to controlling these risks and ensuring success is sound management. The Commission needs to establish an organizational structure and obtain the proper managerial, technical, and contractual talent needed to ensure that the development of EDGAR is soundly managed.

At the March 11, 1987, meeting, Commission staff agreed that the Commission currently does not have all of the managerial or technical skills needed for the operational EDGAR system, and stated that they were in the process of hiring

² Commission estimate as of July 1986, based on proposed 7-year contract. Figure not adjusted for current proposed 8-year contract.

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additional staff for the EDGAR project. In addition, they indicated that they plan to use FEDSIM or some other firm to provide additional technical expertise to help evaluate the operational system's development. In a subsequent meeting, Commission staff provided us additional information on the Commission's approach for managing the EDGAR project, and discussed their plans to hire an experienced, senior executive as overall EDGAR project manager. We also discussed their plans to establish an Office of EDGAR Management and their efforts to hire additional staff for this office. The Office of EDGAR Management would report to the EDGAR project manager and would be responsible for technical oversight, contract administration, price regulation for electronic dissemination, and filer training.

These are positive steps, and we urge the Commission to assemble its management team and to maintain it throughout the EDGAR contract. However, because the Commission plans to award the operational system contract by June 1987, it is doubtful that this team will be in place at that time, particularly the project manager, who is to be obtained from outside the Commission. While we recognize that delaying contract award could require the Commission to undertake additional administrative processes to obtain revised pricing or schedule data from offerors,³ we believe the management structure and staffing of the EDGAR project are essential considerations for congressional authorization and appropriation decisions. These considerations are essential, too, because many critical decisions on contract administration and software design and development, which will set the direction and determine the success of EDGAR, will likely be made in the early stages of contract negotiation and project implementation.

Conclusions

The Commission has made a concerted effort to respond to recommendations in our report, and we believe that its planned actions regarding data tagging, EDGAR financing, and

³ The operational system Request For Proposals closed on February 27, 1987, with a minimum period for Commission acceptance of 120 days. Essentially this deadline means that the Commission must accept a proposal by June 27, 1987, or offerors are not obligated to furnish items at the prices or times specified in the proposals.

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cost/benefit analysis are appropriate. With the exception of data tagging, we believe that these actions should be completed prior to award of the operational system contract. When completed, these actions should provide the Congress with additional information it needs to determine whether development of the operational EDGAR system should be authorized and funds appropriated.

The Commission is continuing to develop its management approach and to obtain staff with the appropriate managerial, technical, and contractual talent for the project, and we believe that such a management team can successfully manage the risks that are inherent in these projects. However, because project management is critical to the success of EDGAR, we also believe that the Commission should not award a contract for the operational system until, at a minimum, the project manager and the head of the Commission's proposed Office of EDGAR Management are in place.

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As agreed with your office, we will continue to monitor EDGAR's development and will notify you if we see any issues that warrant further discussion and action. Should you or your staff have any questions or need additional information, please contact Mr. James R. Watts on 202-275-3455. We are also sending copies of this letter to the cognizant House and Senate authorizing and appropriation Committees, and to the Commission.

Sincerely yours,


Ralph V. Carlone
Director

Comments From the Securities and Exchange Commission



EXECUTIVE DIRECTOR

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

June 26, 1987

Mr. William J. Anderson
Assistant Comptroller General
U.S. General Accounting Office
Washington, D.C. 20548

Dear Mr. Anderson:

The Securities and Exchange Commission appreciates this opportunity to comment on the General Accounting Office's May 26, 1987 draft report on the Edgar pilot contract. As a result of discussions with your staff, a number of the Commission's substantive comments are already being incorporated into the final report.

The draft report states that the Commission met its original schedule for developing the functions and capabilities specified as requirements in the original pilot contract. Functions beyond the original contract scope were also developed, and filings from another major program, Investment Management, were added to the existing Corporation Finance workload, thereby doubling the size of the pilot.

The report reaches the overall conclusion that the Edgar pilot demonstrated the technical feasibility of electronic filing, review, and dissemination and that experience gained from the pilot should prove very useful to the success of the operational system. The Commission appreciates this endorsement by GAO to proceed with the operational Edgar and the identification of areas with potential operational risks. The Commission agrees that, although the pilot has successfully tested all major functions, the conversion to a fully operational system must proceed with appropriate planning and management.

Since the GAO inquiry was concluded, the current Edgar operational procurement stipulates that no funds will be expended by the contractor for data tagging until the filers have been given the opportunity for review and comment and the Commission has approved an approach based upon this input. The Commission has also implemented the recommendation that the price of contractor-furnished equipment be specifically negotiated prior to contract award to ensure the lowest reasonable cost to the government by having the General Services Administration's Federal Computer Performance Evaluation and Simulation Center (FEDSIM) perform an assessment of the bidders' ADP equipment and software prices. During contract execution an independent consultant will evaluate prices for all ADP hardware and software prior to purchase. Further, the Commission has selected the Edgar Project Manager, who will begin work on July 13, 1987. All of these actions are in direct response to guidance provided by GAO.

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Exchange Commission

Mr. William J. Anderson
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The Commission appreciates the advice and counsel of the General Accounting Office in making the transition from the successful Edgar pilot to the operational system.

If you have any further questions concerning the pilot or this response, please contact me at 272-2700.

Sincerely,


George G. Kundahl
Executive Director

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