

**GAO**

United States General Accounting Office

Report to the Subcommittee on Interior  
and Related Agencies, Committee on  
Appropriations, House of  
Representatives

May 1990

**FINANCIAL  
MANAGEMENT**

**Bureau of Indian  
Affairs' Efforts to  
Implement New  
Accounting System**



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

Accounting and Financial  
Management Division

B-239020

May 24, 1990

The Honorable Sidney R. Yates  
Chairman

The Honorable Ralph Regula  
Ranking Minority Member  
Subcommittee on Interior and  
Related Agencies  
Committee on Appropriations  
House of Representatives

At a February 1989 briefing of your Subcommittee staff on the efforts by the Department of the Interior's Bureau of Indian Affairs (BIA) to consolidate its billing and collection functions,<sup>1</sup> the staff requested that we monitor the Bureau's conversion to a new accounting system to help ensure its success. This report discusses the status of the conversion and our related concerns.

## Results in Brief

At the time of our fieldwork, BIA was experiencing delays in testing the system and training its users. However, despite these delays, BIA believed it could meet the planned implementation date of October 1, 1990, and would have to delay the implementation only if additional problems were experienced. It is critical that BIA, in attempting to make up for past delays, allow enough time for thorough testing and training. We believe that if BIA operates its new accounting system without fully testing it and correcting all significant problems identified by testing, or without adequately training its users, system operation could be impaired and additional costs could be incurred.

Subsequent to the completion of our fieldwork in January 1990, BIA advised us that it agreed with the concerns we identified and had requested from the Department a 1-year delay in converting to the new accounting system. On April 6, 1990, the Department approved the request and BIA plans to slip the various project milestone dates 1 year for its conversion to the new system.

## Background

BIA is responsible for providing a wide range of services and activities, including education, economic development, employment programs, and

<sup>1</sup>See our report entitled, Financial Management: Bureau of Indian Affairs' Consolidation of Billing and Collection Functions (GAO/AFMD-89-75BR, June 14, 1989).

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general administration, to over 300 Native American Indian tribes. To fulfill these responsibilities, in fiscal year 1989, BIA was budgeted about \$1.5 billion or over 20 percent of the Department's total budget. BIA has various systems and related procedures at its 256 locations—12 area offices, 93 agency offices, 34 field offices, 112 Indian schools, and 5 central office locations—to account for and control these funds.

BIA's financial accounting operations have been criticized by the Department and us in recent years for having inadequate internal controls and unreliable financial data and reports, which have led to its loss of accountability over millions of dollars. Also, the Department has cited material weaknesses in BIA's accounting system in its annual reports under the Federal Managers' Financial Integrity Act since its initial report for fiscal year 1983.

In 1986, the Department initiated a project to replace the existing accounting systems with one integrated departmentwide system. It did this to update its computer technology, improve system efficiency, make the systems more compatible, and alleviate a number of major accounting weaknesses. To accomplish these objectives, the Department purchased a system software package to replace those automated systems being used to support the financial operations in its 10 bureaus and major offices.

The system software contract cost \$4.9 million over a 10-year system life, which began in September 1987. The \$4.9 million provided for software, related documentation, maintenance, training, and consulting services for the first bureau to implement the system. The contract did not include provisions for the assistance needed to implement the system at the other nine bureaus and major offices, including BIA.

The software package, which is available to all federal agencies, is designed to permit system users to enter, edit, and post all accounting transactions to their general ledgers and appropriate subsidiary ledgers simultaneously. Since the accounting system software is preexisting, it does not require substantial development. It does, however, have to be modified to meet each bureau's user and internal control requirements.

BIA spent almost \$2.9 million in fiscal years 1988 and 1989, and anticipates spending approximately \$5.6 million in fiscal years 1990 and 1991, to obtain the software revisions, contractual assistance, and the equipment it needs to implement the package.

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BIA was scheduled to implement the new system in October 1989. However, in June 1989, this target date was changed to October 1990 after it was determined that BIA did not have sufficient time to test the system and train staff nor funds to acquire the necessary personal computers.

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## Objective, Scope, and Methodology

Our objective was to monitor the status and progress of BIA's accounting system conversion effort. To do so, we interviewed BIA's Division of Accounting Management officials located at Washington, D.C., headquarters and BIA's central accounting operations center in Albuquerque. We also interviewed other departmental officials in Washington, D.C. In addition, we interviewed system users at BIA's area offices in Albuquerque and Navajo, New Mexico, and Aberdeen, South Dakota, and its Southern Pueblo agency office in Albuquerque. We also interviewed the system software contractor representative.

We reviewed reports by the Department's Inspector General on BIA's accounting systems and a December 1985 report by the contractor who was hired to review the Department's accounting systems and develop a strategy for departmentwide consolidation. Our work also included reviewing and assessing system documentation on the project, including implementation plans, progress reviews, and draft user manuals.

The purpose of these interviews and reviews of various documents was to identify past accounting problems and any concerns which may have hindered BIA's conversion to a new accounting system. Throughout our review, we focused on those factors that we believe are critical to the success of major system improvement efforts such as this one. Appendix I contains a brief discussion on the factors used.

In June 1989, BIA was granted a 1-year delay in implementing the new accounting system. As a result, we limited the scope of this review to BIA's efforts and its revised implementation work plan since then. Although we reviewed documents and held discussions relative to BIA's efforts prior to June, it was only to obtain a better understanding of the conversion effort. Our work did not include any tests of the accounting and operating system software, nor did it include any assessment relating to the automated data processing aspects of the project.

We performed our audit work from June 1989 through April 1990 in accordance with generally accepted government auditing standards. During our review, we discussed our work with BIA officials to ensure

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the accuracy and completeness of the information in this report. Their comments were considered in preparing this report.

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## Progress Made but Delays Are Surfacing

BIA has progressed in converting to the new system, including the publication of an overall system project plan and the establishment of a project team to monitor the Bureau's progress. However, several project milestones have not been met, primarily due to the lack of a sufficient number of computers and an acceptable telecommunications system to adequately test the system's operations and train the system's operators and users.

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## BIA Established a Sound Basis to Implement the New Accounting System

In our publication entitled, Critical Factors in Developing Automated Accounting and Financial Management Systems, we identified those elements critical to the successful development of automated systems. A detailed project plan and the establishment of a project team are two elements which provide a good basis for the successful development of an automated system. In June 1988, BIA established a team to coordinate and monitor the progress of its conversion efforts. The members were selected on the basis of their educational backgrounds and knowledge of existing BIA financial and program operations. The team is responsible for (1) testing all automated and manual aspects of the system to ensure it has adequate internal controls and that the controls are working properly and (2) developing and conducting programs to train the system's operators and users.

The BIA team, in conjunction with the departmentwide accounting system conversion team, prepared a detailed plan for BIA's conversion to the new accounting system. The plan established milestones for the various segments of the project, identified the resources required to complete the project, and assigned responsibility for the project's various tasks and milestones.

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## Delays Have Begun Surfacing

Delays in system testing and training may jeopardize BIA's ability to implement the new accounting system in October 1990 as planned. According to BIA officials, the second phase of system testing which was scheduled to begin in February 1990 was delayed as was system training which was to have begun in January. BIA officials have told us that the milestone completion dates for these developmental tasks will be rescheduled.

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**System Testing and Training  
Delayed**

Both system testing and training have been delayed about 2 months, primarily due to a lack of computers. The need for better documentation of the system contributed to the delays. Both testing and training are critical to system development.

BIA planned to extensively test the system in four phases, with each phase including the processing of simulated transactions. Phase I of BIA's system testing was conducted between July and October 1989. Phase II testing was scheduled for between February 1, and June 1, 1990; phase III between June 1, and July 1, 1990; and phase IV between July 1, and September 30, 1990. The current phase of system testing (phase II), planned to begin on February 1, 1990, has been delayed at least 2 months.

A comprehensive test of all manual and automated aspects will enable BIA and the Department to determine if the system is able to properly control and account for BIA's funds before it is put into operation. Without such assurance, the potential increases for subsequent system operational problems and shortcomings in providing the information needed by the agency.

Training is to be provided to the system's information users, accountants, and system operators. The first of three training phases, which was planned to begin in January 1990, has been delayed at least 2 months. Training for field users is to include 2 weeks of classroom training for about 75 accounting officers, budget officers, and data entry personnel from 30 field locations. The second phase is still planned to begin in July and the third in August.

The delays in system testing and training were caused primarily by a lack of computers. BIA determined, based on an analysis of present accounting transaction volumes and future needs, that about 560 new personal computers are needed to process its accounting transactions when the system is fully operational. BIA estimates the cost of these computers and related equipment at about \$2.5 million. The first 150 of these computers were received in March 1990. The other 410 computers, most of which are essential to operate the system at the BIA field offices, have not yet been ordered, but BIA anticipates having them in place by July 1990. These computers are needed for training and for the second and third phases of testing.

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The need for better system operating documentation also hindered system testing and training. To show users and others how to use the system, documentation explaining how the system operates must be clear and complete. However, the contractor's documentation of the system does not adequately describe how the system works, thereby hampering preparation of training materials and phase I system testing. For example, during its phase I testing, BIA could not fully understand the operation of the budget execution and fund control module and had to rely on the contractor personnel to explain how the module worked and to determine if it was working as intended.

### Other Uncertainties

In addition to the uncertainties of when more computers will be installed, BIA does not know when (1) the essential new telecommunications system will be available and (2) changes identified in phase I tests will be made—and whether those changes will identify further changes.

BIA has been directed by the Department to use the new Federal Telecommunications System (FTS-2000) when it becomes available in October 1990. In the interim, BIA plans to use another telecommunications system, Geonet, because its current system is not compatible with the new accounting system. BIA expects to use Geonet at its 12 area offices, but its local agency offices, field offices, and schools will have to use regular long-distance carriers until FTS-2000 is operational. According to BIA, Geonet is more cost-effective than regular long-distance carriers and also provides dedicated lines for data transmission. Also according to BIA, if Geonet is not installed at the 12 area offices by late Spring, BIA may not be able to conduct the accounting system tests as scheduled, possibly delaying the October implementation date.

Then, too, the implementation date may be delayed due to the time (1) the contractor needs to make 31 system software changes identified by previous testing and (2) BIA needs for retesting to ensure that the changes were correctly made. BIA officials informed us that to preclude further delays in system testing, the software incorporating the changes must be ready for testing by late Spring. If not ready, insufficient time may remain to retest the software or to make and retest any other major changes identified during the upcoming testing phases.

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### Conclusion

To ensure that the system is working properly and that sufficient, trained personnel who understand how the system works are available to input the necessary accounting information, it is important for BIA and the Department to ensure that BIA's testing of the system includes

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provisions for assessing all aspects of the system and that the users of the system are properly trained.

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## Recommendation

We recommend that the Secretary of the Interior direct BIA to fully test the new accounting system and train its users before system implementation.

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## Comments of Cognizant Officials

BIA officials agreed with the contents of this report. These officials also informed us that BIA has requested that the Department delay BIA's conversion to the new accounting system by 1 year. They attribute the delay primarily to insufficient funding needed for accomplishing various steps related to the system conversion.

Because the 1-year delay was approved by the Department, the Geonet telecommunications system, which is duplicative, will not be installed, and instead the new system will rely on FTS-2000. Regarding the 560 personal computers that BIA needs, it received 150 in March. The other 410 computers will not be ordered until fiscal year 1991 funds are made available.

The officials indicated that with the approval of the delay they would use the same implementation schedule, but all dates would be 1 year later. For example, the current schedule calls for the first of three training phases to begin in January 1990. With the approved delay, the first phase of training will begin 1 year later, in January 1991.

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As agreed with your office, unless you publicly announce the contents of this report earlier, we will not distribute it until 30 days from its date. At that time, we will send copies of the report to the Secretary of the Interior, the Department's Assistant Secretary for Indian Affairs, the Director of the Office of Management and Budget, and other interested parties. We will also make copies available to others upon request.



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This report was prepared under the direction of John S. Reifsnyder, Assistant Director, who may be reached on 634-5217 if you or your staff have any questions. Other major contributors to this report are listed in appendix II.

A handwritten signature in black ink, reading "Jeffrey C. Steinhoff". The signature is written in a cursive style with a large, stylized initial "J".

Jeffrey C. Steinhoff  
Director, Financial Management  
Systems and Audit Oversight



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## Abbreviations

BIA	Bureau of Indian Affairs
FTS	Federal Telecommunications System



# Critical Factors for Developing New Accounting Systems

In assessing BIA's efforts to convert to a new accounting system, we used several major factors that are often critical to the success of major systems projects. We had identified these factors based on our experience in reviewing accounting systems development projects, and we first published them in January 1987.<sup>2</sup> Since that time, they have been incorporated into appendix III to Title 2 of GAO's Policy and Procedures Manual for Guidance of Federal Agencies. After determining the factors applicable to BIA's conversion, we focused on their impact. A brief discussion of these applicable factors follows.

## Overall Plan

Individual systems projects must be planned and carried out with an agency's overall systems plan in mind. Such a plan ensures that an agency's system can efficiently meet management's current needs, provide for future expansion, ensure compatibility between equipment and systems, prevent duplication, define rationale and scope of individual projects, establish target deadlines, identify necessary resources, designate responsible individuals for each part of the plan, and resolve difficult choices.

## Independent Testing

The purpose of testing is to make certain before accepting and placing the system in operation that it performs as designed. It is important that acceptance testing be planned and performed by a group independent of the contractor/developer.

## Training

Three primary groups require training: the system's information users, accountants, and system operators. Effective training can greatly reduce the tension, smooth the transition, and minimize resistance to change which is often associated with major changes in the workplace. Besides being necessary for operating and using the system, training is also important to ensure that system outputs are properly used and to avoid the natural tendency of people to keep their old systems rather than relying on the new ones.

## Documentation

Systems design must be adequately documented. An adequate set of documentation includes: (1) user manuals for those who use the system's products or enter transactions, as well as for auditors and others who

<sup>2</sup>Critical Factors in Developing Automated Accounting and Financial Management Systems, GAO, (January 1987).

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check operations for correctness, (2) an operations manual for computer operators, and (3) system, subsystem, and program technical specifications for the staff who must make needed changes.

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## **System Operation**

An agency should not try to place any new system in operation until all significant problems identified by testing have been corrected. Otherwise, day-to-day operations will encounter major problems.

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# Major Contributors to This Report

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