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UNITED STATES GENERAL ACCOUNTING OFFICE  
WASHINGTON, D.C. 20548

ACCOUNTING AND FINANCIAL  
MANAGEMENT DIVISION

JUN 22 1983

B-211147

Mr. Peter T. Johnson  
Administrator, Bonneville Power  
Administration



122078

Dear Mr. Johnson:

Subject: Bonneville's ADP Resource Management Controls  
Show Improvement, But More Needs to Be Done  
(GAO/AFMD-83-63).

Bonneville Power Administration's progress in making its automatic data processing (ADP) resource management controls effective has been slow despite (1) the House Committee on Appropriations' continuing concern and interest, (2) the Department of Energy's 1981 audit and recommendations, and (3) our May 30, 1978, letter to you (B-115369). That letter addressed several weaknesses in Bonneville's ADP management controls:

- Insufficient planning and control over long term ADP system development projects.
- Lack of a central ADP leader.
- Poor cost-effective controls and oversight of ADP activities.
- Lack of uniform procedures governing the development of ADP systems.

Through 1981, Bonneville made little progress in correcting these weaknesses. We have now noted some improvements in ADP management controls; however, few of these should be considered complete. (See encl. I for a more detailed assessment of Bonneville's progress.)

SUMMARY OF FINDINGS

In 1981, a Department of Energy (DOE) study, requested by the House Appropriations Committee, validated our 1978 observations and Bonneville's new Administrator committed himself to rapidly improving ADP management structure and operations. In November 1981, the Administrator, as a first step, centralized general-purpose ADP resource management. We were encouraged by this initiative. However, additional ADP management controls are needed to achieve

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effective and economical operations. Also, certain high risk, large scale changes must be faced and carried out successfully. For example, Bonneville needs the following:

- Formalized ADP resource planning controls.
- Uniform, agencywide systems development controls.
- Full ADP cost accounting and user chargeback systems.

In addition to these problems identified in 1978, we found in our latest review that Bonneville needed to improve essential management controls over the following areas:

- Computer systems integration.
- Monitoring of ADP resource management and use.
- Computer protection and contingency planning.

#### OBJECTIVES, SCOPE, AND METHODOLOGY

We began our review in March 1982. Our objectives were to determine:

- How Bonneville had implemented GAO and DOE recommendations for improving ADP management.
- What additional management control problems exist.
- How Bonneville could make needed improvements.

We performed our review in accordance with generally accepted government audit standards. We did not obtain written comments from Bonneville on this report, but we did apprise Bonneville officials of our findings and considered their comments in the report.

We worked at Bonneville offices in Portland, Oregon, and Vancouver, Washington, through January 1983. We interviewed Bonneville officials and reviewed records in five of the six offices plus the Administrator's office. These officials included senior managers as well as technical and operational staff. We also contacted organizations that helped Bonneville size its new computer system and related conversion, including the Federal Conversion Support Center in Falls Church, Virginia.

#### BACKGROUND

The Bonneville Power Administration is a Federal power marketing agency within the Department of Energy. Bonneville wholesales and distributes electric power generated at Federal hydroelectric projects throughout the Pacific Northwest, and provides distribution services for other generating utilities in the region. Bonneville also supports regional energy planning. During

fiscal 1982, Bonneville marketed nearly \$1.27 billion in electricity and earned over \$45 million from its own transmission service. It employs more than 3,000 professional, administrative, and craft employees who administer power marketing, energy conservation, construction, maintenance, and operations programs.

Bonneville's reliance on computer technology has been increasing. Recently, Bonneville embarked on several concurrent efforts to modernize its computer environment:

- A new administrative computer system estimated to cost \$11 million.
- Computer software program conversion efforts estimated to cost \$4 to \$9 million.
- Concurrent development of four major systems that will require an estimated \$18 million during the next 5 years.
- Construction of a \$2 million remote computer facility.

These changes can create a high risk operational environment if top management does not exercise extensive oversight and commitment.

#### FORMAL ADP PLANNING AND SYSTEM DEVELOPMENT CONTROLS ARE NEEDED

Bonneville has recently issued new ADP resource planning procedures, but key management controls were not included. In addition, formal system development controls have not been installed agencywide. Bonneville still needs

- planning controls that will (1) ensure that user needs are identified and addressed when alternatives are evaluated, (2) assess the continuing cost effectiveness of projects, and (3) validate the need for continued support of existing workload;
- reliable cost information for use in management planning and decisionmaking; and
- management review thresholds that fix responsibility for the level and degree of management involvement required to control, manage, and monitor acquisition and systems development projects.

#### Bonneville would benefit from better planning controls

Effective planning controls identify user and manager priorities that can be matched to computer resource needs and then used in evaluating available alternatives and selecting the solution that will provide effective operational support. If Bonneville had

had these planning controls for its recently acquired \$11 million "New Computer System" (NCS), there would be better assurance that the NCS will meet Bonneville's needs. Instead, we found the planning for the new system to be incomplete in many ways. Specifically, we found that

- system benchmark tests and evaluation criteria used to select the NCS vendor were not representative of existing and future needs and thus provided no assurance that user requirements would be met, and
- the inherent restrictions of the hardware and software that was procured may limit the design and capabilities of future computer systems.

We believe Bonneville cannot ensure that NCS will effectively meet agency operational and functional requirements, either initially or over the 8-year system life. Bonneville could need additional resources later on. Moreover, computer equipment acquisitions, such as the minicomputers to be bought for Bonneville's engineering community, were continuing without detailed cost analyses. Such analyses should consider how the NCS could be used for engineering applications.

Finally, although Bonneville has new planning controls, its NCS software conversion was proceeding without a formalized conversion plan. We are concerned because cost estimates for the conversion range from \$4 to \$9 million.

#### Uniform system development controls are needed

Bonneville has yet to install the uniform, agencywide, system development controls that are needed if system development efforts are to be effectively managed.<sup>1</sup> The Division of Information Services (DIS) has devoted considerable effort to studying and using a system development methodology and a related computerized project tracking system. However, Bonneville does not expect to require uniform agencywide controls until December 1984.

Such agencywide controls could have prevented the difficulties Bonneville experienced in starting the development of its Materials Management System. Organizational disagreements caused a 3-year delay in development that raised operating costs by over \$10 million (\$7.5 in unnecessary inventory carrying costs and \$2.6 million in capital costs).

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<sup>1</sup>"Government-wide Guidelines and Management Assistance Center Needed To Improve ADP Systems Development," GAO/AFMD-81-20, Feb. 20, 1981, app. II.

FULL ADP COST ACCOUNTING AND  
USER CHARGEBACK SYSTEMS NOT FULLY INSTALLED

Bonneville has yet to fully account for total ADP costs and allocate those costs equitably to users according to the level of services they receive, as required by Office of Management and Budget (OMB) Circular A-121.<sup>2</sup> ADP cost and user chargeback systems for full cost recovery require user managers to budget and pay for their ADP costs. We believe such a system would improve Bonneville's ADP planning and management controls and also satisfy OMB objectives. In our opinion, without a cost/budget charging system, Bonneville's user managers do not have the motivation needed to make their use of ADP services cost effective, or to make needed tradeoffs between program goals and budgetary constraints.

Although Bonneville has been studying ways to improve its ADP cost accounting system since 1978, its current accounting system does not separately account for all ADP cost items identified in A-121, and does not allocate these costs to users according to the services actually received. In October 1982, Bonneville decided to study the viability of using an alternative approach to A-121. This approach would allocate full ADP costs on a cost accounting basis and provide for reporting the allocated costs to user managers. ADP managers estimated that partial implementation of A-121 would take 1-1/2 to 2 years, while full implementation of an ADP cost recovery system would take from 3 to 4 years. The results of this study were to be reported to the Administrator in April 1983.

COMPUTER SYSTEMS INTEGRATION CONTROLS  
NEED IMPROVEMENT

As of December 1982, Bonneville had not fully installed integration and data interface<sup>3</sup> controls to ensure that common and/or conflicting ADP projects and computer system needs are coordinated and controlled. Bonneville is particularly vulnerable to integration and data interface problems since it is (1) converting existing applications to the new computer system, (2) developing four major ADP systems, (3) developing a data base administration system, and (4) changing to a distributed processing environment--all at the same time.

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<sup>2</sup>OMB Circular A-121, "Cost Accounting, Cost Recovery and Inter-Agency Sharing of Data Processing Facilities," Sept. 16, 1980.

<sup>3</sup>ADP integration and data interface management includes the management and control of shared data; formal change control procedures to analyze the impact of changes on affected data bases, software, and equipment; and compatible, cost-effective data communication between ADP equipment used.

We are concerned because Bonneville has no system for identifying and resolving technical conflicts. Unidentified or unresolved conflicts could degrade the effective and efficient use of Bonneville ADP resources--which are estimated to cost about \$24 million over the next 5 years. Bonneville's senior management needs to clarify management responsibility, authority, and accountability to ensure that systematic integration and interface management controls are followed, and to ensure that adequate staff resources are committed.

#### Decision responsibilities must be defined

Under Bonneville's current policy, the responsibility for new application development is not always placed with the Office of Management Services (OMS). However, the offices developing an application are to coordinate their work with (1) other offices affected by the application and (2) an OMS division. Bonneville policy holds OMS responsible for coordinating projects among Bonneville organizations, but when OMS and developing offices disagree there are no clear guidelines on who makes the final decision. Without a clear policy, we believe timely and cost-effective resolution of interface questions and problems could be difficult.

#### Bonneville needs procedures for resolving technical conflicts

Bonneville also has no controls to ensure that computer technical interface conflicts are systematically identified and resolved. Bonneville officials stated they will use steering committees, reviews of all ADP project proposals, and the new data base administration staff to manage computer systems integration and data interface requirements. Bonneville's ADP project proposal procedure requires a study of the proposed project's impact on existing applications and equipment. A division within OMS is to review the proposal and must approve it before the proposed project can start. However, Bonneville needs to establish procedural controls for handling design changes during development, which almost all systems experience. While some changes may have little interface impact, others can substantially alter the system's interface with other computer systems.

Bonneville expects its data base administration staff to be the focal point of all data base related interfaces and to review data base applications to ensure consistency and conformity and avoid duplication. In December 1982, however, Bonneville officials stated that no control procedures had been written for administration of data bases and, other than the Financial Management Information System and Materials Management System, had made no decision about what data and systems would be subject to data base management. These are important decisions that need to be made so that Bonneville can have the advantage of cost effective management controls.

MONITORING OF ADP RESOURCE MANAGEMENT  
AND USAGE IS LIMITED

Bonneville does limited monitoring of ADP resource use. The Division of Information Systems is responsible, with Bonneville's internal auditors, for monitoring the use of ADP resources. The DIS manager, in February 1983, stated that the DIS staff developing ADP procedures and standards will make compliance reviews. However, DIS had not yet formulated compliance review procedures and the DIS manager was uncertain when monitoring staff would be available. In an earlier report<sup>4</sup> we said that without effective monitoring or auditing of ADP resource management and use, an agency such as Bonneville cannot be sure that adequate procedures and practices are in place to minimize errors, fraud, waste, and abuse.

According to its newly appointed chief auditor, Bonneville has sufficient, knowledgeable, internal audit staff to perform ADP compliance reviews. Moreover, ADP audit is among the "high priority" areas for future audit work. Although as of February 1983 the Administrator had not approved a final fiscal 1983 audit plan, the chief auditor stated that (1) at least one experienced ADP auditor would be devoted to future ADP audits and (2) two ADP audits had already been completed during fiscal 1983. But these audits were only reviews of tape library controls and on-line terminal usage controls. Without more internal audit commitment to ADP compliance reviews, Bonneville will not have sufficient independent assurance that the responsible offices are implementing ADP management directives as expected, and using ADP resources cost effectively.

COMPUTER PROTECTION AND CONTINGENCY PLANNING  
NEED IMPROVEMENT

Bonneville has progressed toward protecting its general purpose computer and data processing systems. It has issued a computer security manual and several formalized control procedures and standards, completed a risk analysis that identified computer security weaknesses, and identified mission-critical computer programs and data. We believe these efforts are important first steps to a computer security program. However, Bonneville still needs controls that will continually

- classify and screen its ADP personnel according to the sensitive and critical nature of data handled,
- prepare and test a contingency plan (that is, a backup plan for maintaining continuity of ADP operations in the event of a disaster),

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<sup>4</sup>"Federal Agencies Still Need To Develop Greater Computer Audit Capabilities," GAO/AFMD-82-7, Oct. 16, 1981.

--develop controls that allow only authorized access to computerized data and files and to the computer operations areas, and

--commit the resources necessary to monitor agencywide compliance with security standards and procedures.

Lack of a complete computer protection program exposes Bonneville to the potential risks of unauthorized disclosure, alteration or loss of data, fraud, interrupted operations, and computer equipment loss or damage. Bonneville's ADP manager and computer security official agree that the additional tasks we have identified need to be done. However, although in December 1982 action on these tasks had been started, none had been completed. We believe top management attention to completing these tasks is needed, particularly since a September 1981 limited computer security analysis disclosed serious lapses in security. The analysis identified the possibility of disclosure of personnel information protected by the Privacy Act (Public Law 93-579) and financial information used to support electric rate increases. If this information were improperly released, Bonneville could be involved in legal suits amounting to as much as \$6 million.

BONNEVILLE'S CENTRALIZATION OF ADP MANAGEMENT  
IS AN IMPORTANT FIRST STEP

In November 1981, Bonneville's Administrator centralized ADP management. This consolidated the ADP management responsibilities previously shared by all the assistant administrators and put them under the assistant administrator for management services. By October 1982 the new ADP management and staff had updated Bonneville's organizational manual to reflect policy and responsibility changes, and issued Bonneville's first handbooks of ADP procedures and standards.

Since November 1981 the Administrator has organized and guided his agency toward key management improvement opportunities, and progress is being made. However, we believe Bonneville would benefit further from adoption of an information resource management operational concept.

Information resource management concepts  
could improve Bonneville's management  
of ADP resources

An information resource management environment should provide the senior management oversight and control Bonneville needs to modernize its computing environment and successfully install key management controls.

The Paperwork Reduction Act of 1980, (Public Law 96-511) prescribes the centralization of information management, including ADP, under an information resource manager (IRM) who

- is responsible and accountable for the agency's efficient, effective, and economical use of information resources;
- is a senior official who reports directly to the agency head; and
- has approval authority over the agency's information functions.

Such a manager must have the support of a strong organizational structure to provide the managerial framework necessary to integrate information planning and management control, direction, and accountability. Further, user needs must be responded to in a coordinated and economical manner. This demands a management program that addresses the agency's operational requirements and values in an understandable and consistent way; includes policies, standards, goals, and measurable objectives; and continually evaluates performance.

Bonneville's Administrator has already begun consolidating Bonneville's information management resources. But the newly centralized ADP management organization faces high operational risks, particularly without the key controls we have discussed. We believe Bonneville's adoption of an IRM operational concept and organizational framework is another appropriate step. It is an essential step if there is to be the level of oversight and control needed to minimize the high operational risks and to ensure effective and economical ADP management practices.

#### RECOMMENDATIONS

To help the Bonneville Power Administration achieve effective and economical ADP resource management, we recommend that the Administrator:

- Adopt information resource management operational concepts, with an organizational framework that specifically assigns agency information responsibilities to a central leader who reports directly to the Administrator.
- Define a time-phased action plan for implementing and improving ADP management controls, such as planning, systems development, full ADP cost accounting and user chargeback, ADP equipment acquisitions, systems integration, compliance monitoring, and computer protection.

We also recommend that the Administrator periodically report to the Department of Energy's information resource manager on Bonneville's actions and progress toward cost effective control practices.

Our policy is to followup on our recommendations to see how they have been implemented. We would appreciate a written statement on the actions you have taken or plan to take. This statement is requested no later than 60 days after the date of this report and should contain projected completion dates for all actions not yet completed.

We are sending a copy of this report to the Director of the Office of Management and Budget, the Secretary of Energy, the Administrator of General Services, and the House Committee on Appropriations. We will also make copies available to other interested parties.

Sincerely yours,



Walter L. Anderson  
Senior Associate Director

Enclosure

Recommended Actions	Source	Date	Bonneville's Assessment			GAO's Assessment of Degree to Which Intent of Recommendation was Addressed		
			Percent Completed		Completion Date	Fully	Partly	Comments
			Pre-10/81	Post-10/81	(Forecast) or Actual			
<b>Reorganization:</b>								
1. Centralize ADP management	DOE	10/81	--	100	11/81		x	1. Significant first step made, but centralized ADP management not fully instituted.
2. Delegate to define scope of centralized ADP management	DOE	10/81	--	100	11/81	x		2. Completed.
3. Dissolve the ADP Policy Board	DOE	10/81	--	100	10/81	x		3. Completed.
4. Charter ADP users coordinating committee	DOE	10/81	--	100	4/82	x		4. Independent compliance monitoring questioned.
5. Charter material management project office	DOE	10/81	--	100	10/81	x		5. Interface management process needed.
<b>General management:</b>								
6. Provide and endorse BPA-wide policies, standards, guidelines, and procedures for ADP systems development	GAO	5/78	30	100	10/82		x	6. Systems development discipline not installed agency-wide.
7. Direct Administrator's personal attention to ADP management needs	DOE	10/81	--	100	10/81	x		7. Continuing need for formal top management involvement.
8. Submit periodic progress reports	DOE	10/81	--	100	12/81	x		8. Reporting ongoing.
9. Promulgate ADP management policies and directives per DOE 1360.1 and 1360.2	DOE	10/81	--	100	10/82		x	9. Officials admit more needed; we agree.
<b>ADP planning:</b>								
10. Institute thresholds for management review of systems	GAO	5/78	40	70	[2/83]		x	10. Planned procedure not in place.
11. Plan system developments by a. identifying duplicative efforts b. establish cost/benefits	GAO	5/78	40	50	[9/83]		x	11a. Limited identification by application. 11b. Status of cost benefit use not clear.
12. Review computer acquisitions a. NCS-minicomputer interface b. minicomputers	DOE	10/81	--	100	1/82		x	12. Reevaluation not complete.
13. Review NCS evaluation criteria for software imbalance	HAC	9/82	--	***	[2/83]		x	13. Imbalance not corrected.
14. Review NCS benchmark	HAC	9/82	--	***	[2/83]		x	14. Not based on functional requirements.
15. Develop software conversion plan with FCSC	HAC	9/82	--	***	[2/83]		x	15. FCSC advice, assistance minimized.
16. Compare, report NCS cost/benefits estimated versus actual	HAC	9/82	--	***	[2/83]		x	16. Continuous progress reports follow as new systems become operational.
<b>Cost Accounting:</b>								
17. Implement ADP cost accounting and budgeting system	GAO	5/78	30	70	[4/83] study done		x	17. Approach undecided; full cost recovery requires 3-4 years.
18. Evaluate Bonneville-wide system personnel cost tracking	DOE	10/81	30	70	[6/83]		x	18. Not yet implemented.
19. Track all ADP costs	Testimony	3/82	--	70	[10/83]		x	19. Not yet implemented.
<b>Uniform System Development Discipline:</b>								
20. Implement Bonneville-wide system development discipline	GAO	5/78	30	60	[12/84]		x	20. Discipline not implemented agency-wide.
21. Evaluate PC/70 cost tracking	DOE	10/81	--	100	8/82	x		21. PC/70 evaluated; available, but not required.
<b>Compliance Monitoring:</b>								
22. Review 1982 audit plan for ADP audit priority	DOE	10/81	--	100	10/81		x	22. Plan reviewed, but not done.
23. Hire full-time ADP auditor	Testimony	3/82	--	100	6/82	x		23. Hired auditor/limited work done.

Abbreviations and notes:

-- not applicable  
 \*\*\* Bonneville will complete its response to these recommendations in February 1983 Congressional hearings.  
 NCS -- Bonneville's new computer system (contract awarded in December 1982).  
 PC/70 -- A commercial, computerized project tracking package.

DOE -- A DOE study team report on Bonneville's ADP management  
 GAO -- A GAO letter report to Bonneville's Administrator, May 30, 1978.  
 HAC -- A September 21, 1982 House Appropriations Committee report.  
 FCSC -- The Federal Conversion Support Center

GAO COMMENT/ASSESSMENT  
(of items on preceding chart)

Reorganization

1. The Administrator centralized the responsibility for ADP management functions with the Assistant Administrator for Management Services by a November 4, 1981, memorandum; however, because key ADP management disciplines are not fully installed, the centralization is incomplete. (See pp. 1-2.)
2. The Administrator implemented action by memorandum, November 4, 1981.
3. The Administrator dissolved ADP Policy Board by memorandum, October 16, 1981.
4. The Information Management Advisory Group (IMAG) was chartered and formed. The IMAG charter was incorporated in the Bonneville Manual October 29, 1982. A review of the charter shows that Bonneville has placed considerable reliance on IMAG representatives to ensure that their respective organizations (offices) will enforce ADP procedures and policies. This situation, however, raises the question of independent review, which is an important function in compliance monitoring.
5. The Materials Management Project Office was chartered December 1981; and the Project Manager named December 27, 1981. To date, the Materials Management System (MMS) development has progressed at a slow pace. Although Bonneville has identified this system as having a substantial benefit to the organization, the system is still in the scoping phase with completion now planned for the spring of 1987. Also, there is some question about the interface design activities among the variety of interrelated subsystems.

General Management

6. Bonneville issued ADP policy, procedures, and standards manuals October 29, 1982. However, several topics are still not addressed. These include contingency planning, cost accounting, and systems development methodology to name a few.
7. The Administrator accepted his responsibility for ADP management by memorandum dated October 21, 1981.

Although formal, periodic ADP status reports called for by the DOE study team have been discontinued, two other formal reporting methods are in use. Discussions are held between the Administrator and the Assistant Administrator for Management Services on an informal basis to discuss ADP issues. As pointed out by DOE, formal reporting is an important addition to the oral discussions held by management because it allows

management to document and clarify any important issues raised. Misunderstandings over responsibilities and decisions are thus eliminated or greatly reduced.

9. Same as item #6.

#### ADP Planning

10. Procedures defining cost thresholds for ADP management review had not been issued as of January 1983. Considering when the recommendation was originally made, the estimated completion date of February 1983 shows slow progress. (See p. 3.)
- 11a. In 1978, we observed that Bonneville was allowing different organizations to independently develop their own applications programs, resulting in uncoordinated or unnecessarily duplicative effort. Bonneville's DIS director said that a review of the agency's current applications portfolio showed duplicative applications exist, but not to such an extent that it represented significant waste. In addition, DIS is proposing tighter control on functional and data element duplication for "large" system development efforts through data administration. However, Bonneville has not yet defined the data administration role and needs to improve interface management, which addresses such duplications. Because (1) user managers still do not budget or pay for DIS-provided ADP services and may employ their own computer specialist personnel and (2) DIS's compliance monitoring and interface management processes need improvement, we believe Bonneville remains vulnerable to unnecessary duplicative application development.
- 11b. We recommended that Bonneville collect ongoing, developmental costs for each system and compare those costs to plans and estimated benefits. The purpose is to allow Bonneville to monitor system operations and determine the need to redirect, initiate, or terminate new development projects that no longer have actual benefits to the organization. Bonneville does not have in place a system to monitor and compare costs and benefits of systems throughout their systems life cycle to make such management decisions.
12. Bonneville reviewed (a) the NCS acquisition plans and (b) the minicomputer acquisition plan, and decided to reduce the planned number of minicomputers and urged the acquisition of the NCS as soon as possible. We found the review of the NCS acquisition plan inadequate. Computer sizing was not based on quantifiable workload data and conversion decisions are frequently changing. The integration of the minicomputers as part of the total computing resources available to Bonneville was not done. There was no detailed cost analysis that considered how the NCS could be used to cost effectively meet engineering applications.

13. Although Bonneville reexamined the evaluation criteria for the NCS, we found serious questions concerning the weighting criteria and technical evaluation of the NCS proposals. Bonneville's evaluation criteria gave more emphasis to the operating system software rather than the applications software. In addition, the evaluation focused on desirable items rather than mandatory with much of the technical evaluation based on perceived rather than actual vendor information.
14. We found that the benchmark and sizing processes were inadequate. The work was not based on quantifiable workload data. Instead, a predetermined size computer was established and benchmarking was then aimed at meeting that requirement.
15. Until recently, the Federal Conversion Support Center's role in Bonneville's pending multi-million dollar software conversion effort has not been clear. However, according to the DIS director, as of February 1983, Bonneville will be using the Center's basic agreement and conversion contractor list for conversion efforts.
16. NCS was not installed so actual versus estimated cost/benefit data were not available.

#### Cost Accounting

17. The cost accounting issue has been raised over and over, but to Bonneville has not yet accomplished the desired objective. In fact, 3 to 4 years will pass before this action will occur. Bonneville was studying the user chargeback concept but no decision had been made. (See p. 5.)

#### Uniform Systems Development Discipline

20. Bonneville has not implemented an agencywide systems development discipline. Systems development discipline includes cost accounting and change control, planning, management and user involvement, and design/development phasing.
21. Although Bonneville has evaluated PC/70, it is not being used consistently agencywide. The issue is not whether to endorse PC/70 or any other specific package but to have a uniform system to track and control ADP systems development projects.

#### Compliance Monitoring

22. In a memorandum dated October 16, 1981, the Administrator said he planned to review the chief auditor's audit plan to assure adequacy of ADP review. He also stated that an experienced ADP auditor was hired who would "devote the majority of his time to a review of plans and progress in ADP activities." As of June 1982, however, no ADP audits had been performed and little time was spent on ADP-related activities. At most, the

ADP auditor had commented on some proposed ADP directives and attended some ADP-related meetings. The ADP auditor was assigned to work of higher priority.

23. In June 1982, another ADP auditor was hired "to spend a majority of his time working on ADP audits." The ADP audit plan is still being developed so audit emphasis is undetermined. With Bonneville's reliance on internal audit for compliance monitoring and internal audit's limited participation in the systems development process, adequate ADP audit coverage is questionable. (See p. 7.)