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United States General Accounting Office

GAO

Report to Congressional Requesters

July 1988

WATER RESOURCES

Costs of the Fountain Valley Authority Pipeline

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GAO/RCED-88-125

GAO

United States
General Accounting Office

Denver Regional Office

Suite 300-D
2420 W. 26th Avenue
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B-227258

July 13, 1988

The Honorable William Armstrong
United States Senate

The Honorable Timothy Wirth
United States Senate

On March 12, 1987, you requested that we investigate and respond to concerns raised by the Fountain Valley Authority regarding the cost of a pipeline built by the Bureau of Reclamation's Missouri Basin Region.[1] These concerns were cited in Authority President J. D. Phillips' February 25, 1987, letter to you. On the basis of the letter, a subsequent meeting with Mr. Phillips, and discussions with your office, we agreed to examine

- the increase in the pipeline project's total cost;
- whether the Bureau had the legal authority to charge overhead costs to the Authority; and
- the equity of the Bureau's overhead charges, especially the indirect overhead costs called centralized project activities.

Our responses to these concerns are summarized below. By way of a brief introduction, the Fountain Valley pipeline, located in central Colorado, was designed to convey an average of 20,100 acre-feet of water annually from the Pueblo Reservoir through the Fountain Valley Authority's treatment plant near Colorado Springs to various users. Through its 38-mile trunk line and 10 miles of laterals, the pipeline delivers water for municipal, domestic, and industrial use to the cities of Colorado Springs and Fountain, the Security and Stratmoor Hills Water Districts, and the Widefield Homes Water Company.

The pipeline's construction began in 1980, under the terms of a July 1979 contract between the Southeastern Colorado Water Conservancy District and the United States (acting through the Secretary of the Interior). Under the contract terms, the Bureau would build the pipeline as part of the Fryingpan-Arkansas project (authorized by 76 Stat. 389, as amended by 88 Stat. 1486), and the District would repay the Bureau's project costs, estimated in January 1978 at about $45.8 million. The contract identified the Fountain Valley Authority as fiscal agent in the

[1] The Fountain Valley pipeline was constructed primarily by the Bureau's Lower Missouri Region, which was merged with the Upper Missouri Region to establish the Missouri Basin Region in fiscal year 1986.

administration, operation, and maintenance of the pipeline. In 1985, although some work remained to be done, the pipeline was turned over to the Authority for operation and maintenance.

In summary, we found

- About $12.3 million of the pipeline project's $13.9 million total cost increase (from $45.8 million to $59.7 million) was caused by increases in construction costs (i.e., the cost of construction contracts and related direct overhead costs). Most of this increase can be explained by nationwide increases in construction costs that occurred during the construction period. Additionally, according to Bureau officials, a 19.2 percent overhead rate in the preliminary contract estimate was too low; actual overhead costs have been closer to the Bureau's typical rate of 30 percent. Bureau officials could not explain why the initial overhead rate was substantially underestimated. (See app. I.)
- According to the contract for construction of the pipeline, the Bureau was legally authorized to charge overhead costs (such as for regional and project office expenses) to the Authority. The contract required the Authority to reimburse the Bureau's estimated construction costs as well as any additional costs incurred, including overhead costs. (See app. II.)
- In examining the equity of the Bureau's overhead charges, which included direct and indirect costs, we concluded from our tests that (1) the direct overhead or noncontract costs reviewed (designs and specifications and construction supervision) appeared to be appropriate for the pipeline project and (2) the Missouri Basin Region overcharged the Authority more than half a million dollars of centralized project activities expenses included in indirect overhead charges during fiscal years 1981 and 1986. The overcharge resulted from the Region's applying an incorrect percentage allocation rate in 1981 when distributing overhead costs among individual water project features, such as to the Fountain Valley pipeline, and shifting other projects' indirect overhead costs to the Authority in 1986 which we believe was inequitable because the additional indirect overhead costs charged bore no relationship to benefits received and were properly allocable to other projects. This cost-shifting did not conform to generally accepted accounting principles prescribed for the federal government by the Comptroller General. (See app. III.)

Also, since 1979, the Region has used three different methods to allocate indirect overhead costs to the Fountain Valley Authority. Changing methods, although not contractually prohibited, increased the Authority's indirect overhead cost charges. Moreover, the Bureau's lack of a uniform cost distribution method permits the Bureau's six regions to use diverse methods for allocating such costs to projects. Such regional diversity defeats the concept that to be useful accounting information should be comparable among entities operating in similar circumstances.

Officials of the Missouri Basin Region agreed that some of the centralized project activities' indirect overhead costs charged to the Authority in 1981 and 1986 were inequitable. They also agreed that the Bureau's changes in allocation methods during the project's life resulted in additional costs to the Authority. Accordingly, regional officials agreed to recompute the pipeline's centralized project activities cost allocations, using each of the three methods that had been applied during the project's life. In recomputing the allocations, the officials will correct the erroneous rate applied in 1981 and exclude inequitable indirect overhead cost-shifts such as those made in 1986. They will then provide the recomputation results to Authority officials and determine a reasonable amount of indirect overhead costs the Authority must pay.

These actions should provide an appropriate basis for Bureau and Authority officials to determine the indirect overhead costs properly allocable to the pipeline project. However, further action is necessary to correct the other accounting problems we noted during the review.

Recommendations

To assure that all Bureau regions are (1) using an appropriate and uniform cost allocation method, (2) recording and reporting reliable project cost data, and (3) complying with accounting principles for federal agencies, we recommend that the Secretary of the Interior direct the Commissioner, Bureau of Reclamation to

- select and approve an indirect overhead cost allocation method that is equitable to all projects and direct all regional office administrators to use the approved method consistently and
- require Missouri Basin regional administrators to stop the practice of shifting indirect overhead costs among projects to avoid exceeding project budgetary limits, and thereby bring the Region's accounting practices into conformance with prescribed accounting principles.

Agency Comments

The Department of the Interior provided written comments on a draft of this report. Overall, Interior agreed with our findings and recommendations, but offered comments regarding what they believe were factual errors and differences in understanding about what indirect overhead costs would be recomputed. We made changes as appropriate in this report to clarify some points and addressed Interior's other points in our response to its comments found in appendix V.

We conducted our review from April 1987 through January 1988 in accordance with generally accepted government auditing standards. Details of our scope and methodology are presented in appendix IV.

As arranged with your office, we are sending copies of this report to the Office of Management and Budget; the Secretary of the Interior; and the Fountain Valley Authority, Colorado Springs, Colorado. Copies will be available to others upon request.

Major contributors to this report are listed in appendix VI.

David A. Hanna
Regional Manager

Contents

Project Cost Increase Was Primarily Caused by Increased Construction Costs

The total project cost increase for the Fountain Valley pipeline was primarily attributable to construction cost increases. The latter were generally in line with increases occurring in construction cost indices during the pipeline's construction. Compared with the Bureau's preliminary (1978) estimate, adjusted by an index that measures changes in construction costs, actual construction costs exceeded the estimate by less than $1 million. The Bureau's preliminary estimate also included an overhead rate that was too low and not typical of Bureau rates, according to regional officials. Also, compared with a subsequent and more precise Bureau estimate used to judge construction bids, actual construction costs turned out to be $5.3 million less than this later estimate.

By the end of September 1987, the Bureau had charged the Authority $59.7 million[1] in actual project costs, an increase of $13.9 million over the 1978 cost estimate of $45.8 million. As shown in table I.1, most ($12.3 million) of the increase can be linked to construction cost increases during the project's life, with additional indirect overhead costs accounting for the remainder. The cost for land and rights was about $0.5 million less than originally estimated.

Table I.1: Project Cost Increase (As of September 30, 1987)

Dollars in millions

Cost category	1978 cost estimate	Actual cost (as of 9/87)	Increase (decrease)
Construction costs:			
Contracts	$37.1	$46.2	$9.1
Regional office direct overhead (noncontract costs)	5.2	8.4	3.2
Total	**42.3**	**54.6**	**12.3**
Indirect overhead	2.2	4.3	2.1
Land and rights	1.3	0.8	(0.5)
Total	**$45.8**	**$59.7**	**$13.9**

[1]This cost excludes about $7.4 million in interest on funds advanced during construction. Actual total costs may differ from the September 1987 costs, depending on the outcome of several contract disputes. For example, two major contract disputes, of about $250,000 each, involve a supervisory control system (an automated system that controls water flow) and a cathodic protection system (electric currents that prevent pipeline corrosion).

Actual Construction Cost Increase Was Small

Although total construction costs exceeded the 1978 cost estimate by about $12.3 million, this increase is considerably less after giving effect to adjustments by an index that measures relative annual construction costs. The original Bureau estimate for constructing the pipeline included $42.3 million of direct construction costs for contracts and regional office direct overhead costs. When this amount was adjusted for general construction cost increases that occurred during the project's construction (using the Bureau's published construction cost indices) it increased to $53.5 million.[2] Actual construction expenses incurred for these items as of September 1987 were $54.3 million (excluding about $0.3 million in repairs), so the adjusted construction cost increase was less than $1 million.

Because some indirect overhead costs were allocated based upon the amount of construction cost spending, the indirect allocated overhead costs also increased (we did not estimate the amount) as construction costs increased. However, as discussed in appendix III, over half a million dollars of indirect overhead costs was excessive in the 2 years we examined.

Bureau's Preliminary Contract Estimate Was Too Low

A factor affecting both the construction cost increases and the additional indirect overhead costs was the tentative nature of the Bureau's 1978 cost estimate. This preliminary estimate, based on early project designs, was intended to indicate only the approximate quantities and costs of each type of material, equipment, and labor the project would require. The preliminary estimate included $37.1 million for construction contracts. Subsequently, to determine whether contractors' construction bids were reasonable, the Bureau prepared more precise engineering estimates. These later estimates were based on completed project designs and specifications and indicated more accurately the anticipated quantities and costs of each resource required. The engineering estimates for the construction contracts totaled $51.5 million, higher than both the preliminary estimate of $37.1 million and the September 1987 actual total of $46.2 million for construction contracts.

The preliminary contract cost estimate also understated the overhead costs at 19.2 percent, according to Bureau officials, who could not explain why the rate was lower than their typical 30-percent rate. In citing their typical rate, a regional official provided overhead rates on

[2] We used the Bureau's "Construction Cost Trends" to index the 1978 costs. Contract costs were indexed to contract award dates; direct overhead costs were indexed through 1986.

four other pipeline projects that were completed between 1959 and 1987, as shown in table I.2.

Table I.2: Overhead Rates on Four Bureau Pipeline Projects

Dollars in millions

Bureau pipeline project	Project cost	Overhead rate (percent)
Davis	$38.0	32
Pacheco	31.0	27
Hollister (2nd phase)	16.5	39
Southern Nevada (2nd phase)	120.0	20[a]

[a]A regional official said that the rate for this pipeline was only 20 percent because of the large project cost.

On the Fountain Valley pipeline project, the Bureau's actual overhead rate (which the Authority had estimated at 29 percent and cited as "exorbitant") was actually 26.9 percent through September 1987. This rate was a combination of an indirect overhead cost rate of about 9.2 percent and a direct overhead cost rate of about 17.7 percent.

The Authority believed that a 7-percent overhead rate would have been appropriate for the project, based on a law (10 U.S.C. 2306) limiting certain indirect cost rates. This law, however, applies only to architectural and engineering design services that are contracted out to the private sector, and it limits the costs of these services to 6 percent of the total project costs (not including fees). The law does not apply to the Authority's project because the design services were performed by the Bureau rather than a contractor. Nevertheless, according to our review of the Bureau's overhead costs, their costs for architectural and engineering design services were about 7 percent.

The Bureau Had the Legal Authority to Charge Overhead Costs to Fountain Valley

The pipeline construction contract between the Bureau and the Southeastern Colorado Water Conservancy District specifies that the Fountain Valley Authority must repay all expenses incurred by the government in connection with the project.[1] The contract allowed the government to pass on "all expenses of whatsoever kind incurred by the United States in connection with the [pipeline's] construction. . . ." According to article 8a of the contract, the reimbursable expenses included the cost of "labor, materials, equipment, engineering, legal work, superintendence, administration, overhead, . . . all as determined by the United States. . . ."

The contract specifically required repayment of not only the estimated costs, but also any additional costs incurred by the government. The contract stated that the government would spend on the pipeline's construction an amount "not to exceed $45,850,000 (based on January 1978 price levels) plus or minus such amounts, if any, as may be justified by reason of ordinary fluctuations in construction costs. . . ."

The contract further stated, in article 8b, that

"... should the final construction cost of the ... [pipeline] vary from estimates in this contract ... then the estimated construction cost shall be adjusted to conform with said final construction cost figure; and the resulting adjustment ... shall be used to determine the ... [Authority's] and each Subcontractor's respective construction cost obligation."

[1]The Fryingpan-Arkansas Authorizing Act also required repayment of the Bureau's actual construction costs.

Direct Overhead Costs Appeared Appropriate, but Some Indirect Overhead Costs Were Inequitable

We reviewed the Bureau's overhead costs, which included both direct and indirect costs, for the Fountain Valley pipeline project and found that (1) the Region's direct overhead costs appeared to be appropriate and (2) more than half a million dollars of indirect centralized project activities overhead costs charged the Authority during 2 years were inequitable. We also found that some additional indirect overhead costs were charged to the pipeline because the Region used three different methods in allocating these costs during the project's construction period. Some of the region's cost allocation practices were not in conformance with generally accepted accounting principles.

Region's Overhead Consists of Direct and Indirect Costs

The Bureau's overhead costs consisted of direct costs or noncontract costs incurred for a specific project, like the Fountain Valley pipeline, and indirect costs incurred which benefit all projects and are allocated to projects based upon a measure of benefits received. Of the Region's four overhead cost categories, three (investigations, designs and specifications, and construction supervision) consisted of direct costs. The fourth category (facilitating services) consisted of indirect costs. These costs are shown in table III.1.

Table III.1: Overhead Charges to the Authority (As of September 30, 1987)

Dollars in millions

Overhead category	Amount charged
Direct costs:	
Investigations	$1.3
Designs and specifications	4.2
Construction supervision	2.9
Total	**8.4**
Indirect costs:	
Facilitating services	4.3
Total overhead costs	**$12.7**

As of September 1987, direct overhead costs charged the Authority from the Region's three categories totaled about $8.4 million. Costs from the first category, investigations, totaled about $1.3 million and included advance planning and other costs.

Costs from the second category, designs and specifications, totaled about $4.2 million and included costs of planning and engineering services during construction. These costs included costs of reviewing contractors' shop drawings and proposed contract modifications, as well as salary and supply costs incurred in preparing construction designs, specifications, and contract provisions.

Costs from the third category, construction supervision, totaled about $2.9 million and included costs related to placing the pipeline project under construction and ensuring after contract award that the pipeline was constructed in accordance with plans and specifications. These costs included salary costs of Bureau personnel who performed on-site inspections, as well as materials testing, surveying, and contract administration.

As of September 1987, indirect overhead costs charged to the Authority totaled about $4.3 million. Indirect overhead costs are to be allocated among all active projects that benefit from them. These reimbursable indirect costs are generally incurred for regional office and project office support functions. Reimbursable regional office expenses, for example, include those incurred for administrative support functions such as personnel, procurement, data processing, and accounting.[1] Over half of these costs are consolidated into a centralized project activities account for distribution among the Region's active projects. We focused our review on the centralized project activities costs charged to the Authority which, as of September 1987, totaled $2.5 million of the $4.3 million in indirect overhead costs.

Other indirect overhead costs are for the most part reimbursable project office expenses incurred for administrative support functions and program direction which are included in a general expense account for distribution among all projects served by the project office. Costs allocated to the Authority from this account totaled $1.6 million of the $4.3 million. Miscellaneous expenses, such as for communications, trailers and parking, and laboratories are also allocated among projects. Miscellaneous costs charged to the Authority totaled about $0.2 million.

[1]Not all regional office expenses are reimbursable; some are financed by a general administration expense appropriation. These nonreimbursable expenses include the salaries and related support costs of the regional director and immediate staff, as well as division and office chiefs and their secretaries.

Region's Direct Overhead Costs Appeared to Be Appropriate

The direct overhead or noncontract costs in the two cost categories we reviewed[2] (designs and specifications and construction supervision) appeared to be appropriate in that they seemed directly related to the pipeline project. For example, payroll costs (which constituted most of the direct costs) seemed appropriate because employees who charged time to the project worked in Bureau divisions and positions that could reasonably be expected to be working on the project during the time-charge periods.

In the designs and specifications category, the costs we reviewed seemed appropriately related to the Fountain Valley project. Nearly 80 percent of the costs were incurred by the Bureau's Engineering and Research Center in Denver, Colorado. We reviewed direct costs totaling $290,726 incurred by the Center during a total of 5 months selected from 3 fiscal years. Most (92.4 percent) of these costs were for payroll of employees who worked in Center branches that could reasonably be expected to be involved in the project. For example, personnel costs were incurred in the following branches: electrical, mechanical, structural and architectural, water conveyance, and equipment installation and inspection. Also, the work was performed at a time that seemed appropriate for the type of construction work then being conducted.

In the construction supervision category, the costs we reviewed also appeared to be appropriately related to the pipeline project. Employees charging time to the project were in positions in which they could reasonably be expected to work on the project at the time the charges were made. Also, a general if not conclusive correlation existed between contractor construction activity and Bureau supervisory activity. For example, during fiscal year 1981, when contractors expended about $17.6 million, or 38 percent, of construction dollars on the pipeline, employees in the Fryingpan-Arkansas construction office charged about $810,000, or 28 percent, of all supervision charges to the project.

[2]We did not review direct overhead costs in the investigations category because they were incurred before construction began, actual costs were lower than the preliminary estimate, and they were not a concern to Fountain Valley officials.

Some Indirect Overhead Costs Charged to the Authority Were Inequitable

The Bureau's indirect centralized project activities' overhead charges to the Authority were more than half a million dollars too high for fiscal years 1981 and 1986. The fiscal year 1981 overcharges were due to the Region's having applied an incorrect percentage allocation rate when distributing Fryingpan-Arkansas charges among individual water project features like the Fountain Valley pipeline. The 1986 overcharges were caused by the Region's shifting of indirect overhead costs from other projects to the Authority's pipeline project. According to regional officials, this cost-shifting practice is commonly used to keep project expenditures within budgetary limits.

Additionally, during the pipeline's construction, the Region used three different methods of allocating indirect overhead costs to the Authority. These changes resulted in additional charges to the Authority. The cost-shifting practice and the use of three different allocation methods did not conform to generally accepted accounting principles for the federal government as prescribed by the Comptroller General and which, under the Federal Managers' Financial Integrity Act (96 Stat. 814), should be followed.[3]

Region's Use of an Incorrect Rate Caused an Inequitable 1981 Indirect Overhead Cost Allocation

Because the Region applied an incorrect rate in determining the Authority's 1981 indirect centralized project activities' cost charges, the Bureau overcharged the Authority a total of about $240,000. Regional officials agreed that an incorrect rate had been applied in fiscal year 1981 but were unable to explain why, since no documentation existed to indicate how the erroneous rate had been determined.

Indirect overhead charges to the pipeline during fiscal year 1981 were the highest of any year, nearly $1.4 million. Applying the centralized project activities' cost allocation method then in use, the Region allocated its indirect overhead costs first among appropriation accounts,[4] then among water projects (e.g., the Fryingpan-Arkansas project), and finally among individual water project features (e.g., the Fountain Valley pipeline). In this final allocation the Region applied a 64.84 percent rate to its indirect overhead costs, thereby computing the Authority's

[3]These principles are contained in Title 2 of the General Accounting Office Policy and Procedures Manual for Guidance of Federal Agencies. Included in these principles is an underlying and fundamental concept that accounting information be useful. Among the qualities of usefulness are reliability, comparability, and consistency.

[4]The Bureau's primary appropriation accounts are general investigations, operations and maintenance, and construction and rehabilitation (which includes construction of the Fountain Valley pipeline within the Fryingpan-Arkansas project).

centralized project activities cost allocation to be $1,372,141. Using the same allocation method, we determined that the Region had made a computational error in determining the 64.84 percent rate; the rate should have been 53.22 percent. This rate would have resulted in an Authority allocation of $1,131,875, which is $240,266 less than what the Region charged the Authority.

Region's Shifting of Indirect Overhead Costs Caused an Inequitable 1986 Allocation

By applying the cost allocation method in use during 1986, the Region determined that the centralized project activities' overhead cost to the Authority that year should have been about $120,000. However, the Region then raised the Authority's allocation to about $459,000, an increase of about $339,000, by shifting to it portions of other projects' centralized project activities costs. The costs were shifted to avoid exceeding budgetary limits on other regional projects, according to Missouri Basin officials. These limits are generally set out in House, Senate, and Conference reports covering the Bureau's appropriation for construction. Further evidence of this cost-shifting practice was indicated in a regional interoffice memorandum dated July 22, 1986, advising that two projects, Canyon Ferry and East Bench, had run out of money and the indirect charges needed to be stopped as of June 30, 1986.

Cost-shifting distorted projects' true costs and resulted in an inconsistent treatment of indirect overhead costs. This cost-shifting practice does not conform to generally accepted accounting principles for the federal government. Included in these principles is an underlying and fundamental concept that for agency accounting data to be useful it must be reliable and consistent. To be reliable, financial information must be reasonably free from error and bias and faithfully represent what it purports to represent. Once costs were shifted, the Region's project cost data were no longer reliable and costs properly allocable to one project were instead added to the costs of another project. Thus, costs for some projects were understated while others were overstated. To be consistent, accounting information should be produced using essentially the same methods over periods of time. By shifting indirect costs, the region also departed from its usual cost allocation method and, therefore, its accounting information was not consistent over time.

Moreover, in our opinion, the Region's cost-shifting practice was inequitable because the additional indirect overhead costs charged to Fountain Valley bore no relationship to benefits received and were properly allocable to other projects. According to cost accounting standards for defense contractors published by the Cost Accounting Standards Board, any indirect cost allocation method should assure that costs are distributed to projects on the basis of beneficial and causal relationships (4 CFR 418.40c). Although the cost accounting standards apply to contractors doing business with the United States and not specifically to federal agencies, we believe the objective of the standards is sound in that the apparent intent is to assure equity.

Region's Change in Allocation Methods Increased the Authority's Costs

The Region used three different methods to allocate indirect centralized project activities' overhead costs to projects during the pipeline construction period. Although the Region was not legally or contractually prohibited from changing methods and had reasons for doing so, the changes resulted in increased indirect overhead cost charges to the Authority. We also found that the Bureau lacks a uniform cost allocation method across its regional offices and that its accounting data, therefore, are not consistent or comparable. As a result, the agency's accounting information does not conform to the generally accepted accounting principles for federal agencies.

The first change from the original method occurred in fiscal year 1983, when a new computer system made it easier for the Bureau to allocate indirect overhead costs on the basis of direct labor cost charges rather than total direct cost charges to the construction account. From 1979 through 1983, the total actual indirect overhead charges were $3.22 million. However, had the original method (direct cost) been continued during this entire period, indirect charges would have been $2.99 million, or about $230,000 less. Had the revised method (direct labor) been applied throughout the entire 5-year period, the indirect overhead charges would have been $3.16 million, or about $60,000 less than the actual charges.

The Bureau changed its method again in fiscal year 1986, when the Lower Missouri Region was merged with the Upper Missouri Region to form the Missouri Basin Region. The new Region adopted a "funds available" method to allocate indirect overhead costs to all projects of the two combined regions. Using this method, the Bureau allocated about $120,000 in indirect overhead costs to the Authority in fiscal year 1986. However, if the original or the revised method had been used, the 1986 allocation would have been about $49,000 and $21,000 respectively, a decrease of $71,000 and $99,000.

Although the Bureau was not contractually prohibited from changing its allocation method, and had reasons for doing so, the changes undermined the Authority's ability to understand what its actual pipeline costs should be and whether they were based on a reasonable, benefit-related allocation. In the Authority's case, the changes in methods resulted in additional costs. In contrast to the Bureau's practices, cost accounting standards for defense contractors doing business with the United States (4 CFR 331.50) require consistent use of a disclosed or established cost accounting practice, and should changes occur they cannot increase costs paid by the United States. Again, we believe the objective of this standard is sound in that it prevents a cost increase not otherwise provided for in the contract.

Besides the Region's using different indirect overhead cost allocation methods on a single project, we also found that the Bureau lacks a uniform allocation method across its regional offices. This inconsistency, which was also corroborated by Missouri Basin Region officials, was noted in a 1985 Bureau review panel recommendation that a uniform cost distribution method be approved and used Bureau-wide. Also, a Department of the Interior Inspector General representative told us that a recently completed audit showed continuing inconsistency in regions' indirect overhead cost allocation methods.

The Bureau's inconsistency in its use of cost allocation methods, both within the Missouri Basin Region and among regions, does not conform to a fundamental concept included in generally accepted accounting principles for federal agencies. Specifically, the concept is that accounting data be useful. This fundamental concept includes consistency and comparability from period to period and among entities operating in similar circumstances.

Scope and Methodology

During our review, we interviewed Authority officials in Colorado Springs, Colorado, and officials of the Missouri Basin Region in Billings, Montana; the Eastern Colorado Projects Office in Loveland, Colorado; and the Engineering and Research Center in Denver, Colorado. We reviewed Bureau and other federal regulations governing cost accounting, and we examined project contracts, cost estimates, Bureau accounting records, and cost allocation methods that the Bureau used during the pipeline's construction. We obtained data from the Bureau's computerized accounting system although we did not do a reliability assessment of the system. However, we did examine portions of the Region's internal accounting practices in relation to generally accepted accounting principles prescribed for the federal government by the Comptroller General in accordance with the Federal Managers' Financial Integrity Act.

The Bureau charged the Authority for direct overhead costs for investigations, designs and specifications, and construction supervision. Investigation costs were charged before construction began, were less than originally estimated, and were not a concern to the Authority; therefore, we did not examine those charges. Nearly 80 percent of designs and specifications costs were charged by the Bureau's Engineering and Research Center. We reviewed the Center's direct costs charged during a total of 5 months selected from 3 fiscal years. We selected fiscal years 1981 and 1982 because of substantial costs charged by the Center during those years; we selected fiscal year 1985 because it was the last project year during which the Center charged significant costs. From those 3 years, we then selected the 5 months in which the Center had charged the greatest costs. Construction supervision costs were primarily salaries; therefore, we reviewed regional and project office payroll costs during fiscal year 1981, the year in which the largest costs were charged, and during fiscal years 1986 and 1987, the 2 most recent fiscal years.

We examined indirect overhead cost data primarily from 2 fiscal years 1981 and 1986. We selected 1981 because the indirect overhead charges the Bureau allocated to the pipeline project during that year were the highest of all project years. We selected 1986 because its data were the most recent available and because it was the year in which two Bureau regional offices were consolidated, prompting a change in indirect cost allocation methods.

Comments From the Department of the Interior

Note: GAO comments supplementing those in the report text appear at the end of this appendix.

United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MAY 26 1988

Mr. James Duffus III
Associate Director
Resources, Community, and
Economic Development Division
U.S. General Accounting Office
441 G Street, N.W.
Washington, D.C. 20548

Dear Mr. Duffus:

This letter responds to your April 13 letter regarding the General Accounting Office (GAO) proposed draft report entitled, "WATER RESOURCES: Costs of the Fountain Valley Authority Pipeline." In addition to the comments below, enclosed are narrative comments with references to passages of the report.

As the majority of costs of the pipeline were direct in nature we were gratified with the observation that the total pipeline project's cost, as measured by contract and direct overhead costs, was generally in line with increases occurring in construction cost indices during the pipeline's construction.

We concur with your recommendation to select and approve an indirect overhead cost allocation that is equitable to all projects and uniform in its application throughout all regions of the Bureau. In addition we must address consistency and costs that are proportionate to the benefits received. A task force comprised of key budget and finance personnel from within the Bureau will make a complete study of this issue. The task force will complete the study and make recommendations to the Commissioner by October 1, 1988.

We also concur with your recommendation to stop the shifting of overhead costs among projects to avoid exceeding project budgetary limits. This practice has never been Bureau policy. The Bureau's high expenditure and obligation accomplishment contributes to the need for financial managers to

Mr. James Duffus III 2

accurately project fund excesses and shortages so the appropriate fund transfers can be processed prior to year-end. Aggressiveness in this area plus the activity taking place under your first recommendation will stop the overhead shifting process bureauwide.

Thank you for the opportunity to comment on the report.

Sincerely,

Wayne N. Marchant

Assistant Secretary for
Water and Science

Enclosure

NARRATIVE COMMENTS ON GAO DRAFT REPORT
COST OF THE FOUNTAIN VALLEY AUTHORITY PIPELINE
(GAO/RCED-88-125)

Following are our comments regarding factual errors and differences in understanding contained in the subject report.

See comment 1.

Page 3 - Paragraph 3 - Designs and specifications and construction supervision are defined as direct overhead costs. In the case of the work for Fountain Valley, the investigations, designs and specifications, and construction supervision should be defined as direct non-contract costs rather than direct overhead costs.

See comment 1.

Page 4 - Paragraph 2 - This paragraph is the major misunderstanding in the Draft Report. The Draft Report states the regional officials agreed to recompute the pipeline's indirect overhead cost allocations, using each of the three methods that had been applied during the project's life. In response to the GAO letter dated January 8, 1988 (copy enclosed), the Bureau agreed (Bureau's response dated January 28, 1988 (copy enclosed), to recompute the conduit allocations for Centralized Project Activity (CPA) expense using each of the three methods that have been applied over the construction period. We did not agree to the need to recompute the project office general expense. As of September 30, 1987, the total costs are as follows:

	COSTS	PERCENTAGE
Indirect Costs		
CPA	$ 2,489,302	4.17%
Project Office General Expense	1,417,128	2.37%
Miscellaneous	411,119	.69%
Total Indirect Costs	$ 4,317,549	7.23%
Direct Costs		
Non-Contract Costs		
Investigations	$ 1,297,559	2.17%
Designs and Specifications	4,163,685	6.97%
Construction Supervision	2,880,769	4.83%
Total Direct Costs-Non-Contract	$ 8,342,013	13.97%
Contract Costs	$47,039,629	78.80%
Total Direct Costs	$55,381,642	92.77%
TOTAL COSTS	$59,699,191	100.00%

Since the total indirect costs are only 7.23% of the total costs and Project Office General Expense only 2.37% of the total costs, we did not feel a review of the Project Office General Expense was warranted.

The Regional Office is currently in the process of checking the recomputations of CPA using four methods; the two methods used from FY 1978 to FY 1985 by the former Lower Missouri Region and the method used from

FY 1986 to FY 1987 by the Missouri Basin Region. In addition, we are computing what the CPA would be under the MB Regional proposal of distributing CPA.

Now on p. 8. See comment 1.

Page 8 - Table I.1 - Regional Office direct overhead should be classified as Non-contract Costs.

Now on p. 10. See comment 2.

Page 10 - Paragraph 1 - The Draft Report and Bureau calculations through September 30, 1987, for the actual overhead rate differ as follows:

	Draft Report	Bureau Calculations*
Indirect Overhead Rate	9.2%	7.23%
Direct Overhead Rate	17.7%	13.97%
Total Overhead Rate	26.9%	21.20%

*See Bureau calculations from above under comments for Page 3 - Paragraph 3.

Now on p. 10. See comment 2.

Page 10 - Paragraph 2 - The Draft Report states the Authority believed a 7 percent overhead rate would have been appropriate for the project. According to the Bureau calculations and definitions, the indirect overhead rate was 7.23 percent of the total project costs.

Now on pp. 15-17.

See comment 3.

Pages 17 - 19 - The Draft Report states that indirect overhead charges to the Authority were more than half a million dollars too high for fiscal years 1981 and 1986. This assumes the methods being used in those years were acceptable. Per the Draft Report, the correct percentage allocation rate for Fiscal Year (FY) 1981 was 53.22 percent. The original rate used was 64.84 percent. Per the preliminary Regional Office recomputations the rate should have been 58.24 percent using the method in use during FY 1981.

See comment 4.

The Draft Report states the use of three different allocation methods does not conform to generally accepted accounting principles for the Federal Government which requires reliable, comparable, and consistent reporting. The methods were not arbitrarily changed. The use of each allocation method was an effort to allocate accurately the benefits and costs of the project to the appropriate entities.

See comment 1.

The Draft Report includes recalculations for FY 1981 that include all indirect overhead costs, both CPA and Project Office General Expense.

Now on p. 16. See comment 5.

Page 19 - Paragraph 1 - The Draft Report states that for FY 1986, the indirect overhead cost charge to the Authority should have been about $120,000. We were unable to verify the $120,000 figure.

Now on p. 17. See comment 1.

Page 21 - Paragraph 2 - The Draft Report states the first change from the original method occurred in FY 1982. Our records indicate the first change was in FY 1983.

The following are GAO's comments on the Department of the Interior's letter of May 26, 1988.

GAO Comments

1. Clarification has been made to the text of the report.

2. We based our calculations on nonoverhead costs while the Bureau's calculations are based on total project costs. The difference between GAO's and the Bureau's calculations results from the use of a different base or divisor in determining the percentages. GAO determined the overhead rates by dividing the actual direct and indirect overhead costs by $47 million, the divisor being comprised of all nonoverhead costs and including construction contract costs ($46.2 million) plus land and rights costs ($0.8 million). The Bureau's base, however, was the total project costs of $59.7 million. Its base included the direct and indirect overhead costs which we excluded from our base. Hence, the Bureau's use of the total project cost base results in lower percentages for the indirect and direct costs.

3. According to Bureau records, the indirect overhead allocation to the Fountain Valley pipeline in fiscal year 1981 was based on direct charges to the construction account. These direct charges included construction contract costs plus the direct noncontract overhead costs. The Bureau's calculation of 58.24 percent appears not to follow its method in use during fiscal year 1981 because it excludes the direct noncontract costs and uses only contract costs.

4. As stated on p. 17, we recognized that the Bureau had reasons for changing the allocation methods.

5. The $120,000 was included in Bureau records as the Fountain Valley pipeline's share of the $200,000 centralized project activities costs charged to the Fryingpan-Arkansas project in fiscal year 1986. This was part of the Region's total fiscal year 1986 centralized project activities costs of $6 million. According to a Missouri Basin Cost Accounting Section Chief, the fiscal year 1986 distribution of costs to features such as the pipeline within the Fryingpan-Arkansas project was the same percentage used during fiscal year 1985 by the Lower Missouri Region. By applying the 1985 percentage to the $200,000 project cost, we also determined that $120,000 was the Fountain Valley share.

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