

PDAAR-323

IAN-40152

MAURITANIA RURAL ROADS
IMPROVEMENT PROJECT --
FUNDING EFFECTIVELY REDUCED
BUT SIGNIFICANT PROBLEMS REMAIN

Project No. 682-0214

Report No. 7-682-85-9
July 12, 1985

UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT
OFFICE OF THE REGIONAL INSPECTOR GENERAL FOR WEST AFRICA

UNITED STATES ADDRESS
RIG/DAKAR
AGENCY FOR INTERNATIONAL
DEVELOPMENT
WASHINGTON, D.C. 20523

July 12, 1985

INTERNATIONAL ADDRESS
RIG/DAKAR
C/o AMERICAN EMBASSY
B.P. 40 DAKAR, SENEGAL
WEST AFRICA

Mr. Mark Edelman
Assistant Administrator
Bureau for Africa
Agency for International Development
Washington, D.C.

Dear Mr. Edelman:

This report discusses the results of our audit of the Rural Roads Improvement Project in Mauritania. The objectives were to review project progress, the justification for funding additional construction, and the adequacy of contractor performance and Mission management.

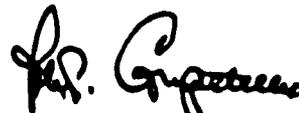
We found limited progress in completing the planned 209 kilometers of road under this \$6.5 million AID-funded project. At March 1985, only 50 kilometers were completed and 49 kilometers were partially constructed. The project had encountered serious design and implementation problems caused partly by poor contractor performance and inadequate USAID/Mauritania management. The Mission was requesting an additional \$14 million to complete the road.

We found the Mission request lacked adequate economic justification and did not assure the road would be maintained or linked with the national road network. We recommended disapproval of the request and improvements in contractor and mission management. On March 25, prior to the issuance of our draft report, you disapproved the Mission request. After further study, the Bureau approved increased funding of \$6 million for a modified project design.

The Africa Bureau and USAID/Mauritania comments on our 3 draft report recommendations enabled us to close that portion of the recommendation concerning the Mission funding request, and resolve the balance of that recommendation and the other two. As part of our follow up process on corrective action, we are requesting the Mission provide additional information supporting the \$6 million funding approval. Because we consider the plan to correct Mission and contractor problems ambitious, we suggest the Bureau oversee Mission progress in carrying out these actions.

Please advise us within 30 days of any comments you might have on this report. Thank you for your continued interest and support of our audit activities.

Sincerely,



John P. Competello
Regional Inspector General

UNITED STATES OF AMERICA
AGENCY FOR INTERNATIONAL DEVELOPMENT
OFFICE OF THE REGIONAL INSPECTOR GENERAL FOR WEST AFRICA

UNITED STATES ADDRESS
RIG/DAKAR
AGENCY FOR INTERNATIONAL
DEVELOPMENT
WASHINGTON, D.C. 20523

July 12, 1985

INTERNATIONAL ADDRESS
RIG/DAKAR
C/o AMERICAN EMBASSY
B.P. 40 DAKAR, SENEGAL
WEST AFRICA

Mr. Don Miller
Director
USAID/Mauritania
Nouakchott, Mauritania

Dear Mr. Miller:

This report discusses the results of our audit of the Rural Roads Improvement Project in Mauritania. The objectives were to review project progress, the justification for funding additional construction, and the adequacy of contractor performance and Mission management.

We found limited progress in completing the planned 209 kilometers of road under this \$6.5 million AID-funded project. At March 1985, only 50 kilometers were completed and 49 kilometers were partially constructed. The project had encountered serious design and implementation problems caused partly by poor contractor performance and inadequate USAID/Mauritania management. The Mission was requesting an additional \$14 million to complete the road.

We found the Mission request lacked adequate economic justification and did not assure the road would be maintained or linked with the national road network. We recommended disapproval of the request and improvements in contractor and mission management. On March 25, prior to the issuance of our draft report, the Africa Bureau disapproved the Mission request. After further study, the Bureau approved increased funding of \$6 million for a modified project design.

The Africa Bureau and USAID/Mauritania comments on our 3 draft report recommendations enabled us to close that portion of the recommendation concerning the Mission funding request, and resolve the balance of that recommendation and the other two. We are requesting the Mission provide additional information supporting the \$6 million funding approval. Also, because we consider your plan to correct Mission and contractor problems ambitious, we suggest you closely monitor progress in carrying out these actions.

Please advise us within 30 days of any comments you might have on this report. Thank you for the assistance provided to my staff during the audit.

Sincerely,



John P. Competello
Regional Inspector General

EXECUTIVE SUMMARY

The Office of Inspector General for Audit/West Africa reviewed the Rural Roads Improvement Project in Mauritania at the request of USAID/Mauritania. The objectives of our audit were to determine (1) project progress, (2) whether a USAID/Mauritania request for additional funding was justified, (3) whether project internal controls and Mission management were adequate, and, (4) whether contract performance was satisfactory. Our audit, completed in March 1985, was made in Nouakchott, Mauritania and at the construction site near M'Bout and covered project activities between May 1983 and February 1985.

In March 1985, USAID/Mauritania sought Africa Bureau approval for an additional \$14 million to complete 209 km of unpaved road to link a region of southwestern Mauritania with the national network and Nouakchott, the capital. The 209 km originally were to have been completed under a \$7.5 million project approved in 1982, with AID providing a \$6 million grant and the host government the balance. As of February 1985, only 50 km were completed and another 45 km were in various stages of construction.

Our review showed the Mission request for additional funds was not supported because (1) the project was not economically justified, (2) adequate road maintenance was not assured, and (3) construction of the road link with the national network was uncertain. We advised the Mission of our findings in March 1985. Nevertheless the Mission sought approval from the Africa Bureau. The Mission recognized the project was not cost effective, but believed the road was a necessary precondition to development in southwestern Mauritania.

Our review also showed USAID/Mauritania did not effectively monitor the project because staff capability and continuity were lacking, communication with the host government and the contractor were poor, and controls over project costs were inadequate. In our view, mission management contributed to the project's limited progress and to the escalation of construction costs.

The U.S. technical assistance contractor supervising road construction did not provide adequate staffing, equipment, maintenance, and training of local personnel. While some of these problems were outside the contractor's control, many stemmed from AID not holding the contractor accountable for performance. A contributing factor was that the cost plus fixed fee contract provided no incentive for timely performance. Although we noted some strengthening of contractor performance, substantially more improvement was needed.

Our draft report recommended the Africa Bureau and USAID/Mauritania not fund the additional \$14 million for the

Rural Roads Improvement Project. Also that any new funding options approved as a result of further study for road construction be justified on the basis of (1) cost effectiveness, (2) assurance of adequate maintenance, and (3) adequate linkage with the existing road network in Mauritania. The report also recommended significant improvements in mission management and contractor performance.

On March 25, subsequent to our audit field work, the Africa Bureau disapproved the Mission request. The Director of the Office of Sahel and West Africa told us the Assistant Administrator's decision not to approve the \$14 million request was made independent of, but consistent with, our audit recommendation. After studying various options, the Bureau approved a \$6 million supplement. The new design allowed for lower design standards and correspondingly lower costs. Construction was to be completed by October 1986, and, with three years maintenance, the project was extended to 1989.

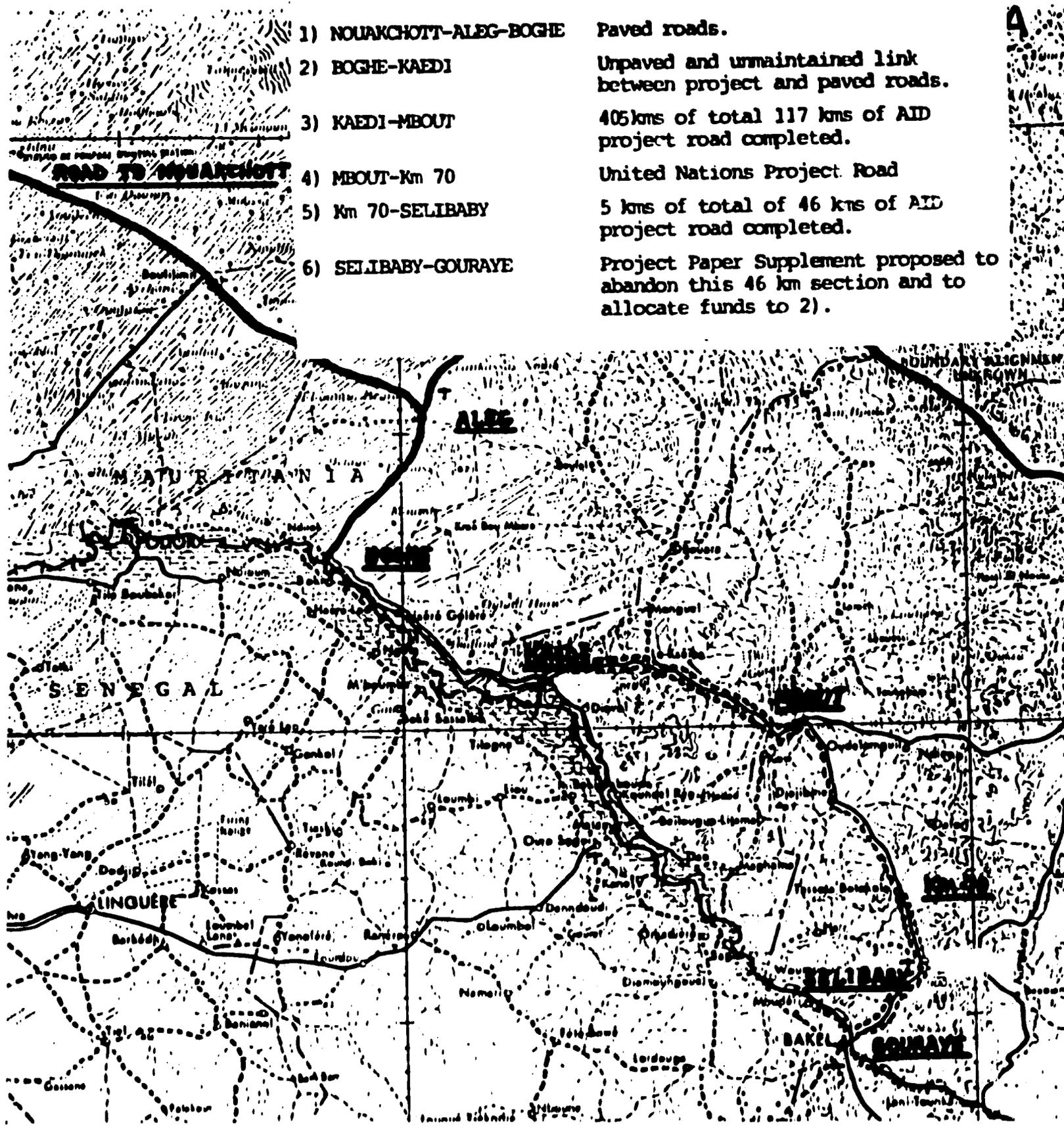
In responding to our draft report, the Africa Bureau and USAID/Mauritania outlined actions justifying the \$6 million additional funding. These included (1) a new economic justification, (2) clarification with the Government of Mauritania about the need for assured road maintenance and linkage with the existing road network, and (3) inclusion of conditions precedent in a new grant agreement to assure the host government proceeds diligently. Additionally, USAID/Mauritania indicated it was implementing better controls over project management and contractor performance.

We believe Africa Bureau and USAID/Mauritania's proposed course of action is responsive to the report recommendations and consider them resolved. However, we believe the planned actions are ambitious and only with concerted effort will the serious problems facing this project be satisfactorily corrected. Because of the difficulties we foresee in improving mission management and contractor performance, we suggest the Africa Bureau closely monitor the actions taken by the Mission. We will also follow up on the open but resolved recommendations.

Office of the Inspector General
Office of the Inspector General

Figure 1. SOUTHWESTERN MAURITANIA

- | | |
|--------------------------|--|
| 1) NOUAKCHOTT-ALEG-BOGHE | Paved roads. |
| 2) BOGHE-KAEDI | Unpaved and unmaintained link between project and paved roads. |
| 3) KAEDI-MBOUT | 405kms of total 117 kms of AID project road completed. |
| 4) MBOUT-Km 70 | United Nations Project Road |
| 5) Km 70-SELIBABY | 5 kms of total of 46 kms of AID project road completed. |
| 6) SELIBABY-GOURAYE | Project Paper Supplement proposed to abandon this 46 km section and to allocate funds to 2). |



**MAURITANIA RURAL ROADS
IMPROVEMENT PROJECT
FUNDING EFFECTIVELY REDUCED
BUT SIGNIFICANT PROBLEMS REMAIN**

TABLE OF CONTENTS

| | <u>Page</u> |
|--|--------------------|
| PART I - INTRODUCTION | 1 |
| A. Background | 1 |
| B. Audit Objectives and Scope | 4 |
| PART II -RESULTS OF AUDIT | 5 |
| A. Findings and Recommendations | 5 |
| 1. Additional Funding is Not Supported | 5 |
| 2. Need to Strengthen USAID/Mauritania Project Management | .13 |
| 3. Need to Improve Contractor Performance | .18 |
| B. Compliance and Internal Control | .22 |
| PART III-EXHIBITS AND APPENDICES | |
| A. Exhibit | |
| 1. Financial Summary as of December 31, 1984 | |
| B. Appendices | |
| 1. Africa Bureau and USAID/Mauritania Comments | |
| 2. Report Distribution | |

**MAURITANIA RURAL ROADS
IMPROVEMENT PROJECT --
FUNDING EFFECTIVELY REDUCED
BUT SIGNIFICANT PROBLEMS REMAIN**

PART I - INTRODUCTION

A. Background

On September 30, 1982, AID and the Government of the Islamic Republic of Mauritania (GIRM) signed a grant agreement for Rural Roads Improvement Project No. 682-0214 to upgrade to all-weather status 209 kilometers of road forming part of the link between Nouackchott, the capital, and southwestern Mauritania. The purpose of the project was to facilitate access to markets and the means of moving social services and agricultural inputs into potentially high food production areas.

Work on the road began in May 1983 with the fielding of an AID-funded U.S. technical assistance team. AID granted \$4.8 million in Sahel Development Program funds plus \$1.2 million in P.L. 480 Title II funds. The balance of the \$7.5 million was to be provided by the GIRM (\$1.3 million) and the United Nations (\$.2 million). In August 1984, AID increased the grant by about \$500,000 and extended the project completion date to June 1987 to allow for project redesign and added construction costs. As of February 1985, only 50 km of the 209 km had been constructed and 45 km were in various stages of completion. The contractor reported in February 1985 that about 18 percent of work had been completed. The Mission estimated an additional \$14 million in AID funds was needed to finance construction and maintenance to September 1989.

The original project agreement allowed for building the road according to a low-cost design used by the United Nations which built a contiguous 70 km section. Since the United Nations project was already completed, the AID project assumed the remaining machinery and vehicles, along with construction and equipment maintenance workers.

The project was managed by a U.S. technical assistance team under a \$1.3 million contract with Morrison-Maierle, Inc. and supervised by the GIRM and USAID/Mauritania. The Mission was to procure overseas commodities. With AID funds, the United Nations was to procure local commodities and disburse local currency. The GIRM was to provide local employees.



**A completed section of the Kaedi-M'Bout road.
Embankments have been raised above the rainy
season water level.
February 1985**

Soon it became evident major project design assumptions were invalid and the project could not be completed on schedule or within estimated costs. In an April 1984 project evaluation, USAID/ Mauritania found that:

- the United Nations road was severely damaged in the rainy season due to inadequate drainage structures and embankments, requiring a re-thinking of construction design standards;
- most of the United Nations' equipment was inoperable or poorly maintained;
- repair facilities were inadequate;
- the equipment was not of the right mix for building an all-weather road;

- the GIRM Public Works Department did not maintain either the United Nations financed road or the Boghe-Kaedi road (see map), thereby impairing access to construction sites and ports of entry for commodities;
- the work force taken over was poorly trained; and
- the GIRM did not meet the \$1.3 million local employee payroll cost, preferring instead to donate \$1.8 million of equipment.

Replanning and recosting of the project culminated in early 1985 in a Project Paper Supplement prepared by USAID/Mauritania requesting \$14 million additional funding to complete the project. The supplement included \$3 million for post-construction maintenance, and shifted \$2.6 million to help another donor construct a link from the project to the national network by eliminating a 46 km section of road in the southern portion of the project. In March 1985 USAID/Mauritania forwarded the supplement to the Africa Bureau for approval.



The United Nations road is in such poor condition that drivers prefer to travel alongside it.
February 1985

B. Audit Objectives and Scope

At the request of USAID/Mauritania, the Office of the Regional Inspector General for Audit/West Africa conducted an audit of the Rural Roads Improvement Project. The audit covered activities from May 1983 through February 1985 and included reviews of accrued expenditures of \$4.3 million in AID funds as of December 31, 1984.

Our objectives were to determine:

- project progress;
- whether the Mission request for additional funds was justified;
- whether project internal controls and mission management were adequate, and
- whether contractor performance was satisfactory.

We reviewed pertinent files and interviewed officials of USAID/Mauritania, the GIRM Public Works Department and the United Nations. We also interviewed the technical assistance contractor staff and visited the construction camp site near M'Bout. We tested financial records of AID expenditures and performed other reviews and tests we considered necessary. The audit was made in accordance with the Comptroller General's Standards for Audit of Governmental Organizations, Programs, Activities and Functions.

At completion of field work in March 1985, we discussed our findings with USAID/Mauritania. We provided a draft of this report for comment to the Africa Bureau and USAID/Mauritania in May 1985.

**MAURITANIA RURAL ROADS
IMPROVEMENT PROJECT --
FUNDING EFFECTIVELY REDUCED
BUT SIGNIFICANT PROBLEMS REMAIN**

PART II - RESULTS OF AUDIT

A. Findings and Recommendations

1. Additional Funding Is Not Supported

The Mission request for additional funds for the Rural Roads Improvement project (1) was not economically justified as required by AID regulations, (2) did not meet road maintenance criteria cited in AID evaluations on rural roads, and (3) did not assure construction of a road segment necessary to provide a link with the national network. As a result, the project lacked the factors and commitments necessary for success.

Recommendation No.1

We recommend the Africa Bureau not approve the Mission request for \$14 million additional funding for this project. We also recommend that the Africa Bureau and USAID/Mauritania justify any additional funding on the basis of (1) cost effectiveness, (2) assurance of adequate maintenance, and (3) adequate linkage with the existing road network in Mauritania.

Discussion

Project Not Economically Justified

AID requires an economic justification for all projects. Part of the justification is to demonstrate that the investment will be cost effective, i.e., benefits will be greater than the investment. AID guidance suggests a 15 percent return on investment as desirable. In 1985, USAID/Mauritania estimated project costs at \$22.5 million excluding lifetime maintenance costs. Total benefits were estimated at about \$20 million over 20 years. Thus, the project was not cost effective.

The economic analysis showed a negative rate of return on investment. We found it also excluded some initial construction costs and underestimated the cost of maintenance over the life of the road. If these items had been included, the cost of the project, at the rate estimated for three years of maintenance, would have been about \$40 million instead of the \$22.5 million included in the USAID/Mauritania-prepared project paper supplement.

In commenting on the economic analysis included in our draft report, the Africa Bureau noted that had construction costs already incurred (sunk costs) been disregarded, the project would have shown a positive rate of return. We disagree. Sunk costs were about \$4.3 million as of December 1984. Using the Africa Bureau's suggestion would have only reduced the

project costs to \$35.7 million versus project benefits of \$20 million.

The project's limited benefits were due to the region's low traffic and agricultural activity. For example, traffic count was estimated at from 3 to 8 vehicles a day. Although agricultural production was expected to increase, the transportation savings resulting from a better road were insufficient to cover the road building cost.

A 1982 Program Evaluation Report^{1/} provides guidance to estimate the cost effectiveness of road projects. When adequate information is lacking, the report recommends a rule of thumb for determining the number of vehicles per day required for economic justification. This rule is based upon "parameters derived from various well-studied road projects." For example, at a cost of \$50,000 per kilometer, including lifetime maintenance, a road must have a traffic count of 55 vehicles per day before construction is justified.

The construction cost per kilometer proposed in USAID/Mauritania's draft project supplement was \$63,700. Using AID's rule of thumb, traffic on the project road would have to exceed 55 vehicles per day to justify this project. Obviously, the traffic count of 3 to 8 was far below that which was necessary.

Mission officials recognized the project was not economically viable and stated such in the Project Paper Supplement. However, they believed the project could be justified as a "penetration road" and represented a precondition to any development in this part of Mauritania. They also concluded the project did not lend itself to economic analysis.

AID Handbook 3 does not exempt "penetration road" projects from the economic justification requirement. AID concedes "penetration roads analysis tends to be more complicated since causal factors may be more dispersed and project timing (of other required inputs) more difficult to estimate." Where a cost/benefit analysis is considered impractical, AID provides alternative methods to quantify and gauge the economic viability of a project; for example, the previously mentioned rule of thumb.

In commenting on our draft report, the Mission pointed out the calculation of the project's economic rate of return was only an approximation. The Mission felt research necessary to include all factors, including social benefits, would have been demanding and time consuming. The Mission also noted that another road in Mauritania had shown significant increase in traffic which could not have been prophesied in an analysis.

^{1/} AID Program Evaluation Report No. 5, Rural Roads Evaluation Summary Report, March 1982.

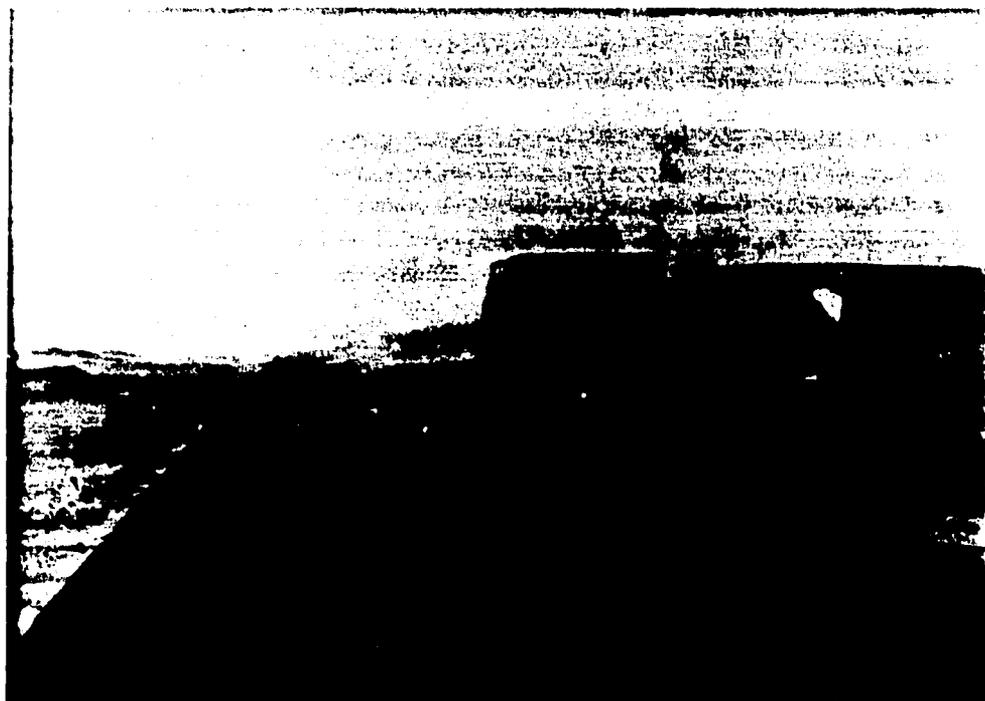
We appreciate the difficulties faced by the Mission in obtaining complete data. This dilemma is recognized in AID guidance. As noted earlier, AID provides alternative methods to quantify and gauge the economic viability of projects, such as the rule of thumb previously suggested. The "rule of thumb" provides methodology to consider growth in traffic resulting from road construction over the life of the project, as well as the quantum jump in traffic which will normally occur the first year. Therefore, we believe adequate guidance is available to allay the concerns of the Mission about the need for extensive research and also the need to estimate significant increases in traffic.

Maintenance Not Assured

The 1982 AID Program Evaluation Report warns against undertaking projects without providing for lifetime road maintenance. It notes numerous projects had shown that without adequate maintenance the benefits of building roads are soon lost as well as the AID investment. In order to avoid this problem, the report concluded maintenance must be recognized as an integral part of a road construction and rehabilitation program. In order to support a construction program with a maintenance component, the total life of the road must be considered.

Recognizing the dangers of not providing for maintenance, USAID/Mauritania's Project Paper Supplement planned to fund 3 years of road maintenance costing \$3 million. In addition, it required agreement with the GIRM on an annual maintenance plan before the end of 1985. While this was a good start, it did not realistically consider GIRM capabilities.

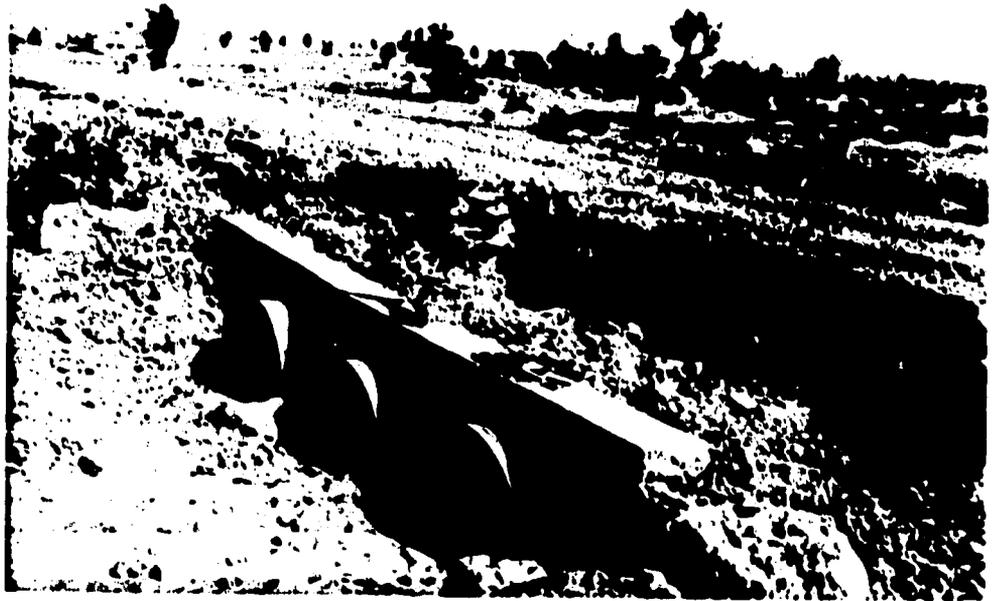
A 1981 World Bank Transport Sector Memorandum noted that the GIRM would need to spend 10 percent of its annual budget to maintain its road network. According to the World Bank, this was clearly beyond its means and out of line with the share of the budget devoted to maintenance by other developing countries.



**Nouakchott-Aleg Road
GIRM road maintenance crews cannot keep up with
drifting sand dunes.
February 1985**

We discussed maintenance capability with Mission officials. We pointed to the 70 km of road completed by the United Nations in 1983 and about 100 km of Boghe-Kaedi section completed in 1980 which had not been maintained as promised. They recognized the GIRM would not have adequate resources to fund maintenance. They also told us future donors had not yet been identified to provide necessary maintenance funds.

In reply to the draft report, USAID/Mauritania indicated it had begun discussions with the GIRM and the contractor to find ways to involve users and affected villages in contributing to the maintenance effort. We agree with this approach, since, if it were successful, it may provide some of the additional resources not available to the GIRM.



Inadequate drainage structures caused flood water to wash away part of the United Nations road. Culverts have not been maintained and are half-filled with sand and debris.
February 1985

Construction of Link to National Network Uncertain

The Boghe-Kaedi road, north of the project, provided the link between the project road and the national network. It was built between 1977 and 1980 as a gravel road but without drainage structures or provision for maintenance. Unmaintained, at least since 1981, it had been unfit for motor traffic during the rainy season, and was largely unusable during the dry season. In February 1985, it took the Inspector General audit team 3 hours to travel this 109 km section. Much of the travel had to be alongside the road. On the road we observed three vehicles stuck in the sand, one of which was the audit team's.



In places the Boghe-Kaedi road is completely covered by sand.
February 1985



Stuck in the sand on the Boghe-Kaedi road.
February 1985

In 1982 USAID/Mauritania assumed the link would be completed concurrently with the AID project since its reconstruction was to be included in the World Bank's Fourth Highway Project. This was a reasonable assumption at the time. However, with countless delays a project never materialized. In March 1982, the GIRM signed an agreement with a donor for \$5 million to finance this construction. However, by February 1985, the engineering study to provide the basis for a construction contract had not been started, although firms were being sought.

Aware of the importance of this link to the project, AID, in the Project Paper Supplement, considered a \$2.6 million contribution towards construction costs. AID estimated construction costs at \$9 million, excluding maintenance. Therefore, allowing for the \$5 million funded by another donor and the \$2.6 million funded by AID, project costs for this northern section remained short by \$1.4 million plus maintenance costs. No donors had been identified to grant the balance. Therefore, it was unknown when this section would be completed.

In commenting on the draft report, USAID/Mauritania told us it had discussed the need for more vigorous action with the GIRM and that the contract for engineering studies would soon be awarded.

Events Subsequent to Audit

Notwithstanding the problems in implementing this project, in March 1985 USAID/Mauritania requested the Africa Bureau to approve added funding of about \$14 million to complete work. Previously, we had briefed the Mission on the results of our review, and of our view that the project lacked the essentials for success. The Mission forwarded our concerns to Africa Bureau for consideration.

The Africa Bureau disapproved the Mission request. The Director, Office of Sahel and West Africa told us that the Assistant Administrator, Africa Bureau made the decision independent of, but consistent with, our draft audit recommendation. Agreement was subsequently reached between the Bureau and the Mission on a modified project design requiring an additional \$6 million instead of the \$14 million requested by the Mission. On May 4, 1985, the Africa Bureau authorized the Mission to increase life-of-project funding by \$6 million. The approval included an extension of the project to 1989. This included three years of maintenance with completion of road construction in 1986.

Management Comments

The Africa Bureau and USAID/Mauritania generally agreed with our draft report and shared our concerns about economic justification, adequate road maintenance and reliable linkage with the existing road network in Mauritania.

According to their response, the project's economic analysis based on the \$6 million supplemental, now shows a favorable rate of return of about 22 percent. The need for maintenance and linkage have been discussed with the GIRM. Additionally, to ensure the GIRM is proceeding diligently, after December 1985 and October 1986 respectively, disbursement of funds for the amended project would be contingent upon evidence (1) the GIRM had in place a staffed and funded road maintenance system, and (2) GIRM has signed a contract with a consulting firm for the economic analysis, engineering design and bid documents for the Boghe-Kaedi road. Also, the GIRM would be required to periodically inform the Mission of progress in road maintenance and construction.

Office of Inspector General Comments

We concur with the Africa Bureau action disapproving the Mission request for \$14 million and consider that part of recommendation number 1 closed at date of report issuance. We also consider Bureau and Mission comments on the economic analysis, maintenance and road linkage to be responsive to the audit recommendation. Thus, we consider the remaining part of recommendation number 1 as resolved. Planned corrective action will be monitored through the IG audit follow-up and closure processes. We have requested the Mission to provide additional information to support the \$6 million approved funding request.

2. Need to Strengthen USAID/Mauritania Project Management

USAID/Mauritania did not effectively monitor the project to ensure AID financed inputs were used effectively and economically. This occurred because mission staff capability and continuity were lacking, communication with the contractor and the GIRM was poor, and controls over project costs were inadequate. While impact is difficult to measure, we believe these weaknesses in mission management contributed to limited progress and to the escalation of construction costs.

Recommendation No. 2

We recommend that USAID/Mauritania:

- a. establish a cycle of site visits and reports by the project officer in accordance with AID guidance;
- b. establish better communication with the GIRM to help address construction work force issues and problems of support to the construction site;
- c. obtain a procurement plan for any proposed additional equipment and spare parts for the contractor;
- d. require the contractor to implement an adequate system to control project fuel consumption and non-expendable property;
- e. review allowability of sub-contractor costs submitted by the contractor;
- f. with the assistance of AID/W determine whether the contractor is liable for damages resulting from non-adherence to AID specifications.

Discussion

Need for Better Monitoring

The AID Handbook requires AID project officials to monitor project inputs to ensure that they are effectively and economically utilized. Monitoring is conducted through reports submitted by the contractor to the Mission, and periodic Mission personnel site visits. To effectively monitor the project, the Mission needs qualified project managers and continuity of staff. USAID/Mauritania did not have qualified project managers most of the time and experienced considerable turnover. Mission officials told us this was due partly to difficulties in retaining staff in Mauritania which is considered a hardship post.

From May 1983 through April 1984, an engineer was serving as Project Manager. At the time he left, road construction had

only been underway for 3 months due to lack of operating equipment. Subsequently the Mission had to rely for guidance on engineers from AID/W or the Regional Economic Development Support Office, West and Central Africa. The project manager position was filled in turn by an equipment specialist, the supply management officer, and a personal services contractor. The Mission was concerned with the staffing situation and, in March 1985, hired a project engineer and a project development officer to help manage the project.

Lack of adequate staff resulted in limited project monitoring. This was evident by the lack of comprehensive site visits. For the year ending March 1985, six site visits were conducted. We considered only one of these comprehensive, i.e., an assessment of all significant aspects of project operations. Site visit reports were limited primarily to procurement problems. Lacking were evaluations of (1) project progress, and (2) the adequacy of construction, contractor performance, and local personnel training.

Need for More Effective Communication With the Contractor and Host Country

In April 1984, the Mission conducted an evaluation of project activities and made numerous recommendations. Contractor personnel at the site were not aware of these recommendations which dealt primarily with improvements over project internal controls. We found that the Mission communicated these problems and recommendations to the U.S.-based contractor when he visited the project site. As of February 1985, much remained to be done to answer the evaluation's concerns; however, contractor personnel at the project site were still unaware of what was expected of them.

The evaluation also recommended GIRM:

- assist the contractor in hiring personnel;
- evaluate the feasibility of contracting with villages for road maintenance;
- develop a maintenance plan for the project road; and
- encourage World Bank participation in maintaining the project road.

GIRM officials told us in February 1985 that these actions were not taken. It appeared that the GIRM was not aware a project evaluation had been conducted nor of their required actions. Mission personnel did not know why the evaluation report was not made available to the GIRM.

We interviewed GIRM officials about their relationship with the Mission. They told us they were not consulted on project construction or progress. In addition, we found a joint

project evaluation between USAID/Mauritania and GIRM was not conducted as required by the project agreement.

In our opinion, more effective communication by the Mission could have helped the contractor improve performance and the host country better participate in the project.

Because of the need to change the design used on the United Nations road, the project had to be redesigned. As a result the original work plan prepared in 1933 was obsolete by the time construction began in February 1984. However, the Mission allowed the contractor to work without a revised plan until December 1984. Concurrently, the contractor was not submitting timely satisfactory progress reports. As a result, the project received little guidance at a time of crucial change.

The lack of a procurement plan resulted in late ordering of spare parts. Added to this problem were poor inventory control and equipment repair and maintenance. This resulted in inoperative equipment, limiting construction. For example, contractor personnel told us that one of the 3 road scrapers provided by the GIRM in January 1984 was inoperative for months, for lack of a fuel pump, greatly reducing construction capability.

The contractor and the Mission could not agree on requirements for spare parts. As of January 1985, 59 requisitions for spare parts were outstanding, some for several months. The Mission questioned the need for some of the parts but had not communicated its views to contractor personnel. Contractor personnel were complaining about lack of Mission support.

Delays in procurement in some cases limited construction work. For example, spare parts for compaction equipment, which is needed if the road is not to be washed away in the rainy season, had been requisitioned in November 1984 but had not been received at February 1985. As result of our audit the Mission was clearing the requisitions and working with the contractor to establish better communication.

Need for Better Controls Over Project Costs

Although reported for several months, the Mission took no action to correct significant contractor deviations from contract construction specifications until September 1984. Claiming verbal instructions from USAID/Mauritania, the contractor built the roadway to a width of 7 meters rather than the specified 5 meters. By the time the Mission took action, some 71 kilometers were in various stages of construction with the 7 meter width.

AID officials agree that the increased width significantly increased project costs, and did not believe oral authority was ever given the contractor for the change in

specifications. Therefore, there is question about the contractor's liability for the deviations.

The Mission needs to exercise better control over project costs, such as fuel. In December 1984, the contractor projected costs of about \$1.7 million for fuel and oil to September 1986. Since April 1984 the Mission had questioned the reasonableness of fuel consumption but had not taken steps to control its use. In November 1984, newly assigned contractor personnel suspected pilferage. Although there was no estimate of actual losses, even a small percentage loss due to pilferage would be substantial.

The Mission should require the contractor to establish better controls. For example, pilferage can be controlled by comparing fuel usage to records of equipment hours of operation and mileage. In January 1985 the contractor reported diesel fuel was disappearing after issuance to the tanker truck for delivery to equipment at construction sites. However, a better system of controls was still not in place. These matters are being further reviewed by our Office of Investigation and Inspections.

Other examples of the Mission's inadequate control over project expenditures were (1) the acceptance of \$409,000 of invoiced costs for subcontract work without reviewing the details for allowability, and (2) failure to ensure the contractor maintained records required in the contract for non-expendable property (vehicles, small computers, furniture, and air conditioners).

While it is difficult to measure the impact of Mission management on the project, we believe a qualified project officer, better monitoring and support of the contractor, and closer links with the host government would have significantly improved project results and reduced costs.

Management Comments

USAID/Mauritania's response to our draft report outlined the course of action being taken to correct the problems. The Mission planned to:

- Establish a cycle of site visits and reports including a Mission Notice requiring such visits for all projects;
- Conduct weekly meetings with GIRM officials, provide copies of contractor progress reports translated into French, and assign a GIRM official to manage the local project labor force;
- Obtain a spare parts procurement plan from the contractor including provisions for minimum-maximum spare parts quantity levels and emergency procedures by the contractor under certain conditions;

- Require the contractor to implement an adequate system to control fuel consumption and non-expendable property, the former to include recording of daily consumption by item of equipment;
- Ask AID/W to determine if the contractor was liable for damages resulting from non-adherence to contract construction specifications.

In addition, the Mission had completed the review of subcontractor costs.

Office of Inspector General Comments

The course of action outlined by the Mission meets the intent of recommendation No. 2 and is considered resolved. Part 2(e) is considered closed upon issuance of this report, based upon Mission review of subcontractor costs. Planned corrective action will be monitored through the IG follow-up and closure process.

3. Need to Improve Contractor Performance

The contractor had problems in providing staff, and efforts to repair and maintain equipment were marginal due to lack of spare parts and trained personnel. Monthly work progress reports did not reflect performance. Training of the local work force was limited. While some of these problems were caused by factors outside of the contractor's control, many stemmed from poor management and the fact that the contractor was not held accountable by the Mission for performance. A contributing factor was that the cost plus fixed fee contract provided little incentive for quality performance. These problems contributed to the high costs and low level of roadwork completed.

Recommendation No. 3

We recommend USAID/Mauritania in any new or amended contract:

- a. define what is expected of the contractor, and
- b. establish goals and milestones against which contractor performance can be measured. This includes construction and maintenance performance within the control of the contractor, staffing levels, setting up adequate controls over spare parts and equipment maintenance, and supervision of the local workforce.

Discussion

Staffing Problems

Contractor performance during the first 8 months after the team arrived in Mauritania in May 1983 was constrained by the need for its staff to repair equipment provided by the United Nations and GIRM and to repair rain damage to some road areas. Road construction was delayed until February 1984.

The contractor had continuing problems in providing competent leadership and staff since the project began which constrained equipment repair and maintenance essential to road construction. For example:

- Two persons had served as Chief of Party with the position again vacant for 3 months at February 1985;
- Two persons had served as construction superintendents, and
- Four persons had served as field mechanic.

Staffing problems also contributed to the contractor's difficulty in providing adequate control over use of equipment and stocking of sufficient maintenance parts. This resulted in frequent breakdowns of equipment, further delaying construction. As a result of the USAID/Mauritania internal

project evaluation, a spare part inventory system was established in late 1984, along with stock records and maintenance records for equipment. As of February 1985, a procurement plan had not been developed and parts requirements were not yet systematized. These were critical because of the long lead time necessary to obtain parts from the United States.

Lack of Adequate Reports and Work Plans

The monthly progress reports submitted to USAID/Mauritania did not adequately reflect the contractor's performance. The reports lacked information required by the contract, especially contractor's recommendations to overcome problems such as equipment utilization and staffing, and progress in design, construction, maintenance, training and procurement. The reports did not compare costs to results and explain lack of progress. In August 1984, the Mission Director notified the contractor's subcontract office that "if the quality of the field team's monthly reports reflects the quality of the work generally, I fear we are all in trouble."

The initial Project Work Plan submitted by the contractor in June 1983 called for completion of 46 kilometers by February 1984, drainage by April 1984, 46 kilometers by June 1984, including drainage, and the remaining 117 kilometers by May 1985. As previously stated, by February 1984 project design, based on the low cost United Nations road, proved to be inadequate and had to be significantly revised. A revised work plan was prepared by the contractor in October 1984 and released in December 1984. However, the contractor operated without this guidance between February and December 1984, when most of the construction took place.

Difficulties in Training Local Personnel

The contractor had difficulty in training local equipment operators, mechanics and drivers as required by the contract due to emphasis on road work output, lack of an organized training program, and problems in communicating with the staff. Consequently, the project had not developed trained cadres to assume highway construction/maintenance and this contributed to problems in keeping equipment operative.

Little Incentive for Quality Performance

Because the contract was on a cost plus fixed fee basis, it was difficult to hold the contractor liable for poor performance. The contractor had no incentive to achieve production targets within a specified time frame, or to control production costs. The contract did not hold the contractor responsible for construction completion. Mission officials were concerned about their lack of management control under this type of contract. Future contracts should concentrate on making the contractor accountable for performance.

Since October 1984, the contractor had improved performance somewhat with the assignment of better motivated replacement personnel - a Construction Superintendent, a Shop Mechanic and an Equipment Superintendent. A Chief of Party was scheduled to arrive soon. These improvements were reflected in the December 1984 and January 1985 progress reports. In February 1985, the contractor was implementing more effective controls over equipment, spare parts and fuel. Much remained to be done.

While the lack of supervision by USAID/Mauritania no doubt contributed to the contractor's poor performance, AID had a right to expect the contractor to adhere to the terms of the \$1.3 million contract, or at least to communicate promptly to the Mission why this could not be done. As discussed above, we believe the underlying reasons for the poor performance were the lack of incentive to produce inherent in a cost plus fixed fee contract, and the subsequent failure of USAID/Mauritania to impose benchmarks and standards by which contractor performance could be assessed.

Management Comments

In commenting on the draft report the Mission stated they planned to:

- Establish mutual expectations through preparation of a scope of work which would be discussed with the contractor;
- Provide close monitoring of contractor performance and to require strict adherence to the workplan, and
- Schedule an evaluation of contractor performance in September 1985 and to decide a course of future action based on the evaluation.

The Mission also noted it had requested that our Office audit the project because of their concerns about the adequacy of contractor performance, adequacy of controls over project property, and the need for an inventory of project property. The Mission stated its disappointment that the audit we performed did not provide details of the systems which it and the contractor could establish for better management.

Office of Inspector General Comments

The course of action outlined by the Mission meets the intent of the recommendation. Recommendation No. 3 is considered resolved. Planned corrective action will be monitored through the IG follow-up and closure process.

In regard to the Mission comment on the audit performed, we concur that the Mission request was centered on financial and compliance elements of the contract with Morrison-Maierle,

Inc. However, our survey showed that the project faced more serious problems, including lack of progress in meeting its objectives and significant cost escalation. Therefore, the primary focus of our audit was to determine the reasons for slow project progress and to analyze the merits of the Mission's request for increased funding of \$14 million.

However, during the audit, on a selected basis, we evaluated the contractor's compliance with contract provisions, controls over expendable and non-expendable property, contractor management performance, and ways to avoid problem areas and facilitate contractor performance. Recommendation No. 2 includes improved controls over contractor work plans, and expendable and non-expendable property. Recommendation No. 3 includes how contractor performance can be facilitated and better monitored by the Mission.

Should the Mission still consider the need for more detailed audit in certain areas, such as an inventory of expendable and non-expendable project property, or a system to provide better controls over contractor activities, a non-federal audit would be appropriate. The Mission should request such an audit through our Office.

B. Compliance and Internal Control

Compliance

Audit results show 4 instances of non-compliance with AID standards or the Project Grant Agreement. These are summarized in Findings 1 and 2.

The request for additional funding was not supported because the project was not economically justified as required by the AID Handbook. The Mission did not establish a cycle of site visits and reports as described in the AID Project Officer's Guidebook, and did not insist that the Contractor keep property records. Non-expendable property records must be used as a basis for listing property to be disposed of to the host country or others at the end of the project -- information which is not currently available. The Project Grant Agreement required a joint AID/GIRM evaluation of the project; this evaluation was not conducted.

Other than the conditions cited, which are dealt with by the recommendations in this report, nothing came to our attention that would indicate that untested items were not in compliance with applicable laws and regulations.

Internal Control

Internal controls over this project were not adequate, especially Mission management controls. This is noted in Finding 2 relative to staff continuity and lack of a qualified project manager, lack of communication with the contractor and the GIRM and inadequate procurement support. Also the Mission failed to review \$409,000 of costs submitted by the contractor, did not ensure the contractor kept adequate inventory records and did not ensure the contractor maintained adequate controls over fuel consumption and non-expendable property.

**MAURITANIA RURAL ROADS
IMPROVEMENT PROJECT --
FUNDING EFFECTIVELY REDUCED
BUT SIGNIFICANT PROBLEMS REMAIN**

PART III - EXHIBITS AND APPENDICES

EXHIBIT I

Financial Summary as of December 31, 1984
Rural Roads Improvement - Mauritania
Project No. 682-0214
USAID/Mauritania
(\$000)

| <u>Component</u> | <u>Plan</u> | | | | <u>Accrued Expenditures</u> | | | |
|------------------------|----------------|----------------|--------------|----------------|-----------------------------|----------------|--------------|----------------|
| | <u>AID</u> | <u>GIRM</u> | <u>UN</u> | <u>Total</u> | <u>AID</u> | <u>GIRM</u> | <u>UN</u> | <u>Total</u> |
| Tech. Assistance | \$1,775 | | | \$1,775 | \$1,198 | | | \$1,198 |
| Commodities | 2,269 | \$1,300 | | 3,569 | 2,075 | \$1,800 | | 3,875 |
| Fuel, Oil & Lubricants | 886 | | | 886 | 393 | | | 393 |
| Local Costs | 682 | | | 682 | 588 | | | 588 |
| Contingencies/Other | 886 | | \$200 | 1,086 | 10 | | \$100 | 110 |
| Total | <u>\$6,498</u> | <u>\$1,300</u> | <u>\$200</u> | <u>\$7,998</u> | <u>\$4,264</u> | <u>\$1,800</u> | <u>\$100</u> | <u>\$6,164</u> |

ACTION: RIG-2 INFO: AMB DCM CHERON 5

APPENDIX I

VZCZCTAA447NKA35E
 OO RUTADS
 DF RUTANK #3068/01 1610918
 ZNR UUUUU 22H
 O 100913Z JUN 85
 FM AMEMBASSY NOUAKCHOTT
 TO AMEMBASSY DAKAR IMMEDIATE 6326
 RT
 UNCLAS SECTION 01 OF 03 NOUAKCHOTT 03068

LOC: 235
 10 JUN 85
 CN: 14248
 CHRG: AID
 DIST: RIG

225
 0927

JUN 10 1985

AIDAC

E.O. 12356: N/A

SUBJECT: AUDIT REPORT, MAURITANIA RURAL ROADS IMPROVEMENT
 PROJECT (682-0214)

REF: NOUAKCHOTT 2935

THE FOLLOWING ACTION SECSTATE 1JUN85 REFTEL REPEATED FOR YOUR ACTION.

UNCLAS NOUAKCHOTT 02935

AIDAC

SUBJECT: AUDIT REPORT, MAURITANIA RURAL ROADS IMPROVEMENT PROJECT
 (682-0214)

REF: (A) STATE 149323, (B) STATE 140724

1. IN RECOMMENDATION NO. 1 THE RIG AUDIT RECOMMENDED THAT THE AFRICA BUREAU AND USAID/MAURITANIA NOT FUND THE RURAL ROADS IMPROVEMENT PROJECT AS DESIGNED BECAUSE IT IS NOT ECONOMICALLY JUSTIFIED, AND THAT NEW FUNDING OPTIONS FOR THE ROAD CONSTRUCTION BE JUSTIFIED ON THE BASIS OF (1) COST EFFECTIVENESS, (2) ASSURANCE OF ADEQUATE MAINTENANCE, AND (3) ADEQUATE LINKAGE WITH THE EXISTING ROAD NETWORK IN MAURITANIA.

2. THE AFRICA BUREAU REVIEWED PP SUPPLEMENT II AND DID NOT APPROV IT AS PRESENTED. INSTEAD, THE STAFF CONFERRED FURTHER WITH THE MISSION ON ALTERNATIVE DESIGN POSSIBILITIES AND FUNDING OPTIONS. ON THE BASIS OF THESE CONSULTATIONS AND AFTER INTENSIVE REVIEW OF THE VARIOUS OPTIONS FOR COMPLETING THE PROJECT AS SOON AS POSSIBLE, AGREEMENT WAS REACHED ON A MODIFIED PROJECT DESIGN WHICH WOULD REQUIRE US DOLS 6 MILLION INSTEAD OF THE PROPOSED US DOLS 13.5 MILLION. THIS SCALED-DOWN SCOPE OF PROJECT ACTIVITIES REDUCES IT TO ITS BASIC AND MORE IMPORTANT COMPONENTS, AND RESULTS IN A FAVORABLE IRR. THE MODIFIED PROJECT DESIGN RECOGNIZES THE ESSENTIALLY RURAL ASPECT OF THE ROAD AND THE RELATIVELY LOW TRAFFIC PROJECTIONS OVER THE NEAR TERM. IT THUS ALLOWS FOR LOWER DESIGN STANDARDS AND CORRESPONDINGLY LOWER COSTS THAN THOSE PROPOSED BY THE CONSULTING ENGINEERS. INSTEAD OF THE ROAD BEING OPEN THROUGHOUT THE YEAR,

25

THERE MAY BE OCCASIONAL RUPTURES AFTER ESPECIALLY HEAVY RAINS. IT IS EXPECTED THAT THERE WILL BE READY PASSAGE FOR AT LEAST 90 PERCENT OF THE TIME. A JUDGMENT WAS MADE THAT THIS WOULD BE ADEQUATE AND CONSISTENT WITH THE STAGE OF DEVELOPMENT IN THAT AREA AT THIS TIME.

3. THE REVISED PROJECT DESIGN NOW PROVIDES FOR A NEAR ALL-WEATHER ROAD FROM KAEDI TO M'BOUT TO SELIBABY. CONSTRUCTION IS EXPECTED TO BE COMPLETED BY OCTOBER 1986.

4. THE US DOLS 6 MILLION ADDITION ALSO INCLUDES THE PROVISION OF US DOLS 400,000 FOR THE USAID PARTICIPATION IN A POST-CONSTRUCTION MAINTENANCE PROGRAM. THE SCALED-BACK MAINTENANCE PROGRAM REFLECTS A MORE CONSERVATIVE APPROACH TO RESURFACING. IT ALSO ANTICIPATES THE POSSIBILITY OF MAKING GREATER USE OF VILLAGE PARTICIPATION AND A FOOD-FOR-WORK PROGRAM IN LIEU OF THE PRESENT FOOD DONATION RELIEF PROGRAM. THE GIRM HAS AGREED THAT THE EQUIPMENT PRESENTLY USED FOR CONSTRUCTION OF THE ROAD WILL BE AVAILABLE FOR MAINTENANCE OF THE ROAD. MOREOVER, THE GIRM HAS INITIATED A 5-YEAR ROAD MAINTENANCE STUDY FINANCED BY THE KUWAIT FUND UNDER THE IBRD FOURTH HIGHWAY PROJECT. THE RESULTS OF THE STUDY WILL BE AVAILABLE TOWARD THE END OF CY 85 FOR REVIEW AT THE CONSULTATIVE GROUP MEETING PLANNED FOR NOVEMBER 1985.

5. THE BUREAU ALSO DIRECTED THAT THE MISSION REVIEW WITH THE GIRM PROGRESS BEING MADE IN INITIATING CONTRACTS FOR A ROAD MAINTENANCE STUDY AND THE DESIGN OF THE BOGUE-KAEDI ROAD, BEFORE EXECUTING A GRANT AGREEMENT THIS IS TO ENSURE THAT THE GIRM IS PROCEEDING DELIGENTLY. IN ADDITION, IT RECOMMENDED THAT THE GRANT AGREEMENT INCLUDE APPROPRIATE CONDITIONS PRECEDENT TO DISBURSEMENT AND CONVENANTS (SEE STATE 140724).

6. THE CORRECTIVE ACTIONS NOTED ABOVE HAVE BEEN TAKEN AND, THEREFORE, ADDRESS AND ARE RESPONSIVE TO EACH OF THE AUDITORS COMMENTS IN RECOMMENDATION NO. 1.

7. THE MISSION HAS RESERVATIONS, HOWEVER, ON CERTAIN COMMENTS INCLUDED IN THE AUDIT DISCUSSION. RE (1), COST EFFECTIVENESS, THE USAID DOES NOT WHOLLY AGREE WITH THE RIG AUDITORS' CONTENTION THAT THE PROJECT PROPOSAL WAS NOT ECONOMICALLY JUSTIFIED, AND THAT ... USAID OFFICIALS RECOGNIZED THE PROJECT WAS NOT ECONOMICALLY VIABLE AND HAD STATED SUCH IN THE PROJECT PAPER SUPPLEMENT. INSTEAD, THE USAID, IN SUBMITTING THE SUPPLEMENT TO AID/W HAD RECOGNIZED THAT A FULL ECONOMIC ANALYSIS HAD NOT BEEN MADE. IN OUR VIEW IT WAS QUESTIONABLE WHETHER THE ADDITIONAL TIME AND COSTS OF FIELD DATA COLLECTION, PROCESSING, AND ANALYSIS WOULD WARRANT THE HAZY LEVEL OF PRECISION WHICH COULD BE EXPECTED IN FORCASTING ANTICIPATED BENEFITS. THE PROJECT'S CALCULATED ECONOMIC RATE OF RETURN WAS ONLY AN APPROXIMATION OF THE REAL ECONOMIC VALUE OF THE PROJECT BECAUSE OF IMPRECISE MEASUREMENT AND IMPERFECT ANALYTIC TECHNIQUES. IT HAD NOT QUANTIIFIED

AND MEASURED, FOR EXAMPLE, THE SUBSTANTIAL PACK ANIMAL AND HUMAN PORTER COSTS WHICH ARE CONSIDERABLY HIGHER THAN THE PER TON-KM COSTS OF MOTOR VEHICLES WHERE A GOOD ROAD EXISTS. THIS KIND OF STUDY ALONG THE MANY TRACKS OF THOSE REGIONS MIGHT HAVE TAKEN LONGER THAN THE TIME REQUIRED TO COMPLETE THE PROJECT. NOR DID THE ANALYSIS ATTEMPT TO INCLUDE THE ECONOMIC VALUE OF NON-ECONOMIC FACTORS SUCH AS IMPROVED SOCIAL BENEFITS (HEALTH, EDUCATION, EQUITY). THE MISSION POSITION WAS THAT WITHOUT DEVELOPMENT OF THE TRANSPORT SECTOR THERE WOULD BE LITTLE DEVELOPMENT BEYOND SUBSISTENCE AGRICULTURE; THE ENORMOUS DIFFICULTIES AND COSTS OF DISASTER RELIEF WOULD IN NO WAY DIMINISH; AND MAURITANIA WOULD CONTINUE TO BE DEPRIVED OF THE BENEFITS WHICH COULD BE EXPECTED FROM DEVELOPMENT OF THE COUNTRY'S ONLY REGION WITH SIGNIFICANT AGRICULTURAL POTENTIAL.

9. AS REGARDS THE NUMBER OF VEHICLES USING EXISTING TRAILS AND TRACKS, WE BELIEVE IT NOTEWORTHY THAT ON THE NOUAKHOTT-NEMA ROAD, BEFORE ITS IMPROVEMENT IN 1980, TRAFFIC ESTIMATES WERE LESS THAN 50 VEHICLES PER DAY. A STUDY IN NOVEMBER 1984 SHOWED THAT THE ROAD TO ALEG (WHICH SERVES THE PROJECT'S GORGOL AND GUIDIMAKA REGIONS AS WELL AS THE EASTERN SAHEL ZONE OF MAURITANIA) WAS CARRYING AN AVERAGE OF OVER 271 VEHICLES PER DAY! IT IS UNLIKELY THAT ANYONE COULD HAVE REASONABLY PROPHESED SUCH REMARKABLE TRAFFIC GROWTH.

9. IN REGARD TO PROJECT DESIGN AND ASSOCIATED COSTS, THE MISSION WISHES TO UNDERLINE THE FACT THAT THE SUBMISSION TO THE AFRICA BUREAU WAS BASED ON ESTIMATES PREPARED BY THE US CONTRACTOR, THE A AND E FIRM WHICH WAS MOST KNOWLEDGABLE ON THE PROJECT AND THE AREA. THESE WERE THEIR BEST JUDGMENTS ON TOTAL COSTS FOR OPTIMUM FUNDING OF THE EFFORT AND WITH OPTIMUM DESIGN STANDARDS. THESE WERE REVIEWED IN AID/W AND DISCUSSED IN DEPTH WITH THE CONTRACTOR BEFORE BEING INCORPORATED INTO THE PROJECT PAPER SUPPLEMENT. THE BOTTOM LINE FOR THE MISSION WAS THE STATEMENT MADE BY THE AID DESIGN OFFICER IN THE PROJECT PAPER SUPPLEMENT THAT WITH THE REVISED DESIGN STANDARDS PROVIDED IN THE PAPER, "AFR/TR/ENG CONFIRMS ... / THAT THE PROJECT /... WILL PROVIDE THE MOST COST-EFFECTIVE ROADS, TAKING ADT, MAINTENANCE COSTS, AND TERRAIN INTO CONSIDERATION.

10. IN REGARD TO POINTS (2) ASSURANCE OF ADEQUATE MAINTENANCE, AND (3) ADEQUATE LINKAGE WITH THE EXISTING ROAD NETWORK IN MAURITANIA, THE USAID SHARES THE AUDITORS' CONCERN AND NOTES THAT WE HAD INCLUDED THESE ISSUES IN THE PROJECT PAPER SUPPLEMENT.

11. TO ASSURE ADEQUATE MAINTENANCE WE HAD INCLUDED FUNDS FOR A THREE YEAR ASSISTANCE PROGRAM. WE HAD ALSO BEGUN DISCUSSIONS WITH THE GIRM AND THE US CONTRACTOR ON FINDING WAYS TO INVOLVE USERS AND AFFECTED VILLAGES IN CONTRIBUTING TO THE EFFORT. MORE RECENTLY, IN OUR SOCIO-ECONOMIC BASELINE STUDY WE HAVE INCLUDED PERTINENT QUESTIONS DESIGNED TO ELICIT WHETHER THERE IS ANY

UNCLAS SECTION 02 OF 03 NOUAKCHOTT 03068

VILLAGE INTEREST IN THEIR PARTICIPATING IN ROAD MAINTENANCE WITHIN A 10KM DISTANCE OF THE VILLAGE. THE RESULTS SO FAR HAVE BEEN POSITIVE AND ENCOURAGING.

12. AS REGARDS THE BOGUE-KAEDI ROAD, WE HAVE HAD LONG DISCUSSIONS WITH THE GIRM AT BOTH THE MINISTERIAL LEVEL AND WITH THE DIRECTOR OF PUBLIC WORKS AND HIS STAFF, ON THEIR TAKING MORE VIGOROUS ACTION TO BEGIN ITS RESTORATION. WHILE THEY COULD NOT PROVIDE SOLID ASSURANCES ON WHEN THIS LINK WOULD BE REALIZED, THERE WAS NEVER ANY DOUBT THAT IT WAS ONE OF THEIR HIGHER PRIORITIES. FURTHER, THE MISSION BELIEVED THAT CONSTRUCTION OF THE KAEDI-SELIPABY ROAD WAS IN ITSELF WARRANTED ON THE GROUNDS OF CONNECTING THE CAPITALS OF TWO REGIONS WHICH ALONE CONTAIN ABOUT A THIRD OF MAURITANIA'S RURAL POPULATION, AND WHICH FROM THE VIEWPOINT OF INTRA-REGIONAL TRADE AND DEVELOPMENT MERIT SUPPORT, EVEN AS OF THE BOGUE-KAEDI ROAD, AS WITH POST-CONSTRUCTION MAINTENANCE, HOWEVER, APPEARS TO BE ENROUTE TO RESOLUTION. THE GOVERNMENT INFORMED US IN EARLY APRIL THAT IT WAS SENDING OUT REQUESTS FOR PROPOSALS FROM SELECTED FIRMS INTERESTED IN MAKING FEASIBILITY AND ENGINEERING STUDIES FOR CONSTRUCTION OF THE BOGUE-KAEDI ROAD. THE CONTRACT FOR THESE STUDIES IS EXPECTED TO BE AWARDED WITHIN THE NEXT FEW MONTHS. (ONE OF THE SELECTED FIRMS HAS ALREADY VISITED THE USAID TO DISCUSS THE PROGRAMS.) THE PRESUMPTION IS THAT FINANCING WILL

UNCLAS SECTION 02 OF 03 NOUAKCHOTT 03068

UNCLAS SECTION 03 OF 03 NOUAKCHOTT 03068

BE PROVIDED BY THE SAME ARAB/WORLD BANK PROGRAM SOURCES WHICH ARE FINANCING THE STUDIES. THE MISSION HAS ALSO FOLLOWED AID/W'S RECOMMENDATION THAT WE INCLUDE THE CONDITIONS PRECEDENT TO DISBURSEMENT AND COVENANTS DETAILED IN STATE 140724.

13. ON THE BASIS OF THE FOREGOING THE MISSION BELIEVES THAT FULL COMPLIANCE HAS BEEN MADE WITH AUDIT RECOMMENDATION NO. 1, AND WE SUGGEST THAT AID/W RESPOND ACCORDINGLY.

PECK
BT

UNCLAS SECTION 03 OF 03 NOUAKCHOTT 03068

ACTION: RIG-2 INFO: AMP DCM CHRON 5

VZCZCTAAJ75NKA819
 OO RUTADS
 DE RUTANK #3176/01 1671317
 ZNR UUUUU ZZH
 O 161301Z JUN 85
 FM AMEMBASSY NOUAKCHOTT
 TO RUTADS/AMEMBASSY DAKAR IMMEDIATE 6344
 INFO RUEHC/SECSTATE WASHDC 3299
 BT
 UNCLAS SECTION 01 OF 03 NOUAKCHOTT 03176

LOC: 240
 17 JUN 85
 CN: 15175
 CHRG: AID
 DIST: RIG

682
 0749

AIDAC

JUN 17 1985

DAKAR FOR RIG/AG/WA

F.O. 12356: N/A
 SUBJECT: DRAFT RIG AUDIT OF THE RURAL ROADS IMPROVEMENT
 PROJECT IN MAURITANIA (682-0214)

1. SEPTEL PROVIDES JOINT AID/W-USAID COMMENTS ON AUDIT
 RECOMMENDATION NO. 1 AND ASSOCIATED DISCUSSION. THIS
 CABLE RESPONDS TO THE BALANCE OF THE AUDIT.

2. (A) RECOMMENDATION NO. 2(A): ESTABLISH A CYCLE OF
 SITE VISITS AND REPORTS. A MISSION NOTICE HAS BEEN
 PUBLISHED TO THIS EFFECT FOR ALL PROJECTS, AND THE RURAL
 ROADS PROJECT OFFICER IS COMPLYING WITH IT.

(B) RECOMMENDATION NO 2(B): ESTABLISH BETTER COMMUNICA-
 TIONS WITH THE GIRM. THE MISSION HAS TAKEN SEVERAL
 ACTIONS. THE PROJECT OFFICER MEETS SEVERAL TIMES EACH
 WEEK WITH GIRM OFFICIALS TO DISCUSS PROJECT DETAILS;
 THE T.A. CONTRACTOR'S PROGRESS REPORT IS TRANSLATED INTO
 FRENCH AND PROMPTLY TRANSMITTED TO THE DIRECTOR OF PUBLIC
 WORKS EACH MONTH; AND IN THE REVISED PROGRAM CURRENTLY
 GETTING UNDERWAY THE MAURITANIAN CONSTRUCTION BRIGADE
 WILL BE MANAGED BY A MAURITANIAN OFFICIAL WHO WILL BE
 TECHNICALLY SUPERVISED BY THE US T.A. CONTRACTOR BUT
 WHO WILL REPORT DIRECTLY TO THE PUBLIC WORKS OFFICIALS IN
 THE MINISTRY OF EQUIPMENT AND TRANSPORT.

(C) RECOMMENDATION NO. 2(C): OBTAIN A PROCUREMENT PLAN
 FOR ANY PROPOSED ADDITIONAL EQUIPMENT AND SPARE PARTS
 FOR THE CONTRACTOR. THE CONTRACTOR PROVIDED A PROCURE-
 MENT PLAN FOR HIS DECEMBER WORK PLAN AND SCHEDULE.
 THIS HAS RECENTLY BEEN REVISED TO REFLECT THE LOWER LEVEL
 OF FUNDING APPROVED BY AID/W AND THE CONSEQUENT IMPACT
 ON EQUIPMENT AND PARTS THAT WILL NOW BE NEEDED. IN
 ADDITION, THE TA CONTRACTOR HAS BEEN DEVELOPING A
 COMPUTERIZED SYSTEM OF MINIMUM-MAXIMUM PARTS LEVELS.
 IF DONE PROPERLY, THIS WILL ELIMINATE THE MANY UNPLEASANT
 SURPRISES WHICH PLAGUED THE EQUIPMENT MAINTENANCE PRO-
 GRAM DURING THE FIRST TWO YEARS. FINALLY, THE PROJECT
 OFFICER HAS MAINTAINED A CLOSE WORKING RELATIONSHIP WITH
 THE CONTRACTOR AND HAS INCLUDED IN THE AMENDED CONTRACT
 A PROVISION WHEREBY THE CONTRACTOR MAY MAKE EMERGENCY

PURCHASES UNDER CLEARLY DEFINED CONDITIONS, INCLUDING PRIOR APPROVAL OF THE PROJECT OFFICER.

(D) RECOMMENDATION NO. 2(D): REQUIRE THE CONTRACTOR TO IMPLEMENT AN ADEQUATE SYSTEM TO CONTROL PROJECT FUEL CONSUMPTION AND NON-EXPENDABLE PROPERTY. THE USAID'S PROJECT OFFICER HAS NOTIFIED THE M-M CHIEF OF PARTY THAT EQUIPMENT SPEEDOMETERS AND HOUR METERS MUST BE REPAIRED AND MAINTAINED, AND ACTUAL FUEL USE DETERMINED DAILY FOR EACH PIECE OF EQUIPMENT. IN REGARD TO NON-EXPENDABLE PROPERTY RECORDS AND CONTROL, THE USAID SUPPLY MANAGEMENT OFFICER HAS CONSISTENTLY PREPARED ARRIVAL REPORTS FOR ALL ITEMS TRANSFERRED TO THE CONTRACTOR, AND HE HAS REQUESTED THAT THESE BE SIGNED BY THE CONTRACTOR'S CHIEF OF PARTY OR DESIGNEE. THESE ARRIVAL REPORTS ARE AVAILABLE IN THE USAID AND WILL BE USED TO HELP THE CONTRACTOR ESTABLISH PROPER RECORDS AND ACCOUNTABILITY.

(E) RECOMMENDATION NO. 2(E): REVIEW ALLOWABILITY OF SUB-CONTRACTOR COSTS SUBMITTED BY THE CONTRACTOR. THE USAID HAS REQUESTED THAT THE TA CONTRACTOR PROVIDE SUPPORTING DETAILS FOR ALL SUB-CONTRACTOR COSTS. THIS HAS BEEN DONE, AND THE USAID IS REVIEWING THE VOUCHERS SUBMITTED FOR THE EARLIER PERIOD OF THE SUBCONTRACT. AS POINTED OUT TO THE AUDITORS DURING THEIR VISIT TO NOUAKCHOTT, THE SUB-CONTRACT WAS ALMOST EXCLUSIVELY FOR THE PROVISION OF SERVICES (MECHANICS AND WAREHOUSE-MAN), AND THE AMOUNTS CLAIMED EACH MONTH WERE, THEREFORE, READILY RECOGNIZED COSTS EXCEPT WHEN THERE WERE ANY SIGNIFICANT CHANGES. SUCH A CHANGE OCCURRED IN SEPTEMBER, FOR EXAMPLE, AND THE ACTING PROJECT OFFICER REQUESTED, RECEIVED, AND REVIEWED THE SUPPORTING DATA. THE USAID HAS REQUESTED THAT SUCH DATA NOW BE PROVIDED WITH EACH MONTHLY BILLING.

(F) RECOMMENDATION NO. 2(F): WITH THE ASSISTANCE OF AID/W DETERMINE WHETHER THE CONTRACTOR IS LIABLE FOR DAMAGES RESULTING FROM NON-ADHERENCE TO AID SPECIFICATIONS. THE MISSION HAS CALLED AID/W, INDICATING THAT THIS WAS DISCUSSED IN OCTOBER 1984 WITH THE PRESIDENT OF MORRISON-MAIERLE. HE SUGGESTED THAT CONSTRUCTION OF A NON-PAVED 7 METER ROAD IN LIEU OF A 5.5 METER ROAD MIGHT HAVE BEEN LESS COSTLY BECAUSE OF OPERATIONAL EFFICIENCIES. ALSO, BECAUSE THE MISSION HAD GIVEN ITS TACIT (IF NOT OUTRIGHT ORAL) APPROVAL AT THE TIME THE CHANGE WAS MADE, THE MISSION NOTED IT MIGHT BE

EXTREMELY DIFFICULT TO PRESS FOR DAMAGES IF LIABILITY COULD INDEED BE PROVEN. WE HAVE NOT YET RECEIVED A RESPONSE FROM AID/W.

3. RECOMMENDATION NO. 3: IN ANY NEW OR EXTENDED CONTRACT (A) DEFINE WHAT IS EXPECTED OF THE CONTRACTOR, AND (F) ESTABLISH GOALS AND MILESTONES AGAINST WHICH CONTRACTOR PERFORMANCE CAN BE MEASURED.

THE PROJECT OFFICER RECENTLY DRAFTED A SCOPE OF WORK AND DISCUSSED IT IN DETAIL WITH A VICE-PRESIDENT OF THE CONTRACTOR. THIS WAS SUBSEQUENTLY INCORPORATED INTO THE PIO/T FOR AMENDMENT OF THE CONTRACT WITH MORRISON-MAIERLE. PRIOR TO THAT THE PROJECT OFFICER HAD DISCUSSED THE CONTRACT AND THE ISSUES WITH THE AID/W CONTRACTING OFFICER. THERE SHOULD NOW BE NO CONFUSION ON MUTUAL EXPECTATIONS. ACTUAL NEGOTIATION OF THE CONTRACT AMENDMENT IS THE RESPONSIBILITY OF THE COGNIZANT AID/W SER/CM CONTRACTING OFFICER. THIS ACTION HAS PROBABLY BEEN COMPLETED OR WILL BE IN SEVERAL DAYS. THE AID/W CONTRACTING OFFICER POINTED OUT THAT CLAUSES WHICH IMPLY THREATS ARE NOT PERMISSIBLE IN A CONTRACT FOR PROFESSIONAL SERVICES. THE PROJECT OFFICER HAS, THEREFORE, INFORMED THE CONTRACTOR ORALLY THAT THE CONTRACTOR'S PERFORMANCE WILL BE MONITORED VERY CAREFULLY FOR STRICT ADHERENCE TO THE APPROVED WORK PLAN AND SCHEDULE. IN SEPTEMBER THERE WILL BE AN EVALUATION AND, IF PERFORMANCE HAS NOT BEEN SATISFACTORY AND NOT IN COMPLIANCE WITH THE CONTRACT, THE USAID WILL REQUEST TERMINATION, EITHER FOR NON-PERFORMANCE OR FOR CONVENIENCE OF THE GOVERNMENT, DEPENDING ON THE CIRCUMSTANCES.

4. THE USAID BELIEVES ITS ACTIONS AND RESPONSES HAVE ADDRESSED ALL OF THE DRAFT AUDIT'S CONCERNS AND REQUESTS THAT THESE RECOMMENDATIONS NOW BE DELETED. RIG IS ALSO REQUESTED TO INDICATE WHETHER IT WISHES ANY ADDITIONAL INFORMATION OR COMMENT.

5. THE USAID ALSO BELIEVES IT USEFUL TO REMIND THE RIG THAT THE OFFICE OF INSPECTOR GENERAL FOR AUDIT/WEST AFRICA REVIEWED THE PROJECT AT THE REQUEST OF THE USAID. THE MISSION'S OBJECTIVE WAS TO OBTAIN THE "PROTECTIVE AND CONSTRUCTIVE SERVICES TO MISSION MANAGEMENT" DESIGNATED IN HANDBOOK 17(34B) AS BEING A SERVICE PROVIDED BY THE IG. ACCORDINGLY, THE USAID PROVIDED THE SCOPE OF WORK CONDENSED BELOW:

"USAID NEEDS AN AUDIT OF THE CONTRACT PERFORMANCE OF THE US T.A. CONTRACTOR, MORRISON-MAIERLE. THIS IS REQUIRED AS A PRE-REQUISITE IN HELPING DETERMINE WHETHER TO EXTEND M-M'S SERVICES BEYOND THE CURRENT EXPIRATION (END MAY 1985), OR WHETHER TO CHANGE THE TERMS AND CONDITIONS OF THOSE SERVICES IF IT IS DECIDED TO EXTEND THE CONTRACT. AUDIT TEAM SHOULD FOCUS ON FOLLOWING WORK AREAS:

(A) IDENTIFY EXTENT OF COMPLIANCE WITH PROVISIONS OF THE CONTRACT IN PROVIDING THE REQUIRED SERVICES AND REPORTS.

(B) MAKE AN INVENTORY OF ALL NON-EXPENDABLE PROPERTY AND REPORT ON THE CONTRACTOR'S MANAGEMENT OF THAT PROPERTY.

(C) MAKE AN INVENTORY OF ALL TOOLS AND CONSUMABLES AND ASSESS WHETHER CONSUMPTION REPRESENTS NORMAL WEAR, TEAR, AND LOSSES, AND WHETHER THE CONTRACTOR'S CONTROL OVER ISSUANCE AND USE MEETS ACCEPTABLE STANDARDS.

(D) RECOMMEND CONTROL SYSTEMS WHICH THE CONTRACTOR SHOULD INSTITUTE FOR ENSURING BETTER MANAGEMENT CONTROL OVER ISSUANCE AND USE OF ALL CONSUMABLES AND NON-CONSUMABLES USED IN THE PROJECT.

(E) RECOMMEND PROCEDURES WHICH BOTH THE USAID AND THE CONTRACTOR MIGHT FOLLOW TO FACILITATE CONTRACTOR PERFORMANCE.

(F) IDENTIFY POTENTIAL PROBLEM AREAS AND PRESCRIBE POSSIBLE REMEDIES FOR AVOIDING THEM.

(G) ASSESS CONTRACTOR'S MANAGEMENT PERFORMANCE OF THE LOCAL WORKFORCE, INCLUDING, IF POSSIBLE, A COMPARISON

27

OF SALARY AND WAGES PAID WITH THOSE GIVEN SIMILAR WORKERS IN MAURITANIA.

(H) ASSESS CONTRACTOR'S OVERALL PROFESSIONAL PERFORMANCE.

(I) RECOMMEND OTHER AUDITS, STUDIES, EVALUATIONS, ETC., WHICH WOULD BE USEFUL AND DESIRABLE IN ENSURING ACHIEVEMENT OF AID OBJECTIVES IN MAURITANIA, GENERALLY, AND IN THIS PROJECT, IN PARTICULAR.

6. WE HAD HOPED THAT THE AUDIT WOULD HAVE BEEN MORE GENEROUS IN PROVIDING DETAILS ON THE SYSTEMS WHICH THE USAID AND THE CONTRACTOR COULD ESTABLISH FOR ENSURING ADEQUATE MANAGEMENT. WE RECOGNIZED THE RELATIVELY SUPERFICIAL DEPTH OF EXPERIENCE AVAILABLE IN MAURITANIA AT THAT TIME FOR THIS PARTICULAR PROJECT AND HAD HOPED TO PROFIT FROM THE AUDITOR'S EXPOSURE TO SIMILAR PROJECTS ELSEWHERE. AS STATED IN THE REPORT, PROJECT MANAGEMENT SUFFERED FROM LACK OF CONTINUITY AND QUALIFIED ADMINISTRATIVE AND TECHNICAL COMPETENCE. THESE GAPS HAVE NOW BEEN FILLED WITH THE RECENT ARRIVAL OF AN EXPERIENCED PROJECT OFFICER/ENGINEER AND A PROJECT DEVELOPMENT OFFICER. BOTH ARE DIRECT HIRE EMPLOYEES. IN ADDITION, THE USAID HAS RETAINED THE SERVICES OF TECHNICAL SERVICES CONTRACTORS TO ENSURE THE CONTINUITY, EXPERTISE, AND IN-DEPTH SUPPORT REQUIRED FOR EFFECTIVE AND EFFICIENT PROJECT EXECUTION. WE BELIEVE THE PRESENT USAID STAFFING AND PLANNED M-M TEAM COMPOSITION WILL MEET OUR NEEDS AND EXPECTATIONS.

PECK
BT

LIST OF REPORT RECIPIENTS

| | <u>No. of Copies</u> |
|---|--------------------------|
| USAID/Nouakchott | 5 |
| Assistant Administrator - Bureau for Africa | 5 |
| Assistant to the Administrator for Management | 1 |
| AFR/CONT | 5 |
| AFR/PD | 1 |
| AFR/CCWA | 1 |
| XA | 1 |
| LEG | 1 |
| GC | 1 |
| OPA | 2 |
| Office of Financial Management (M/FM/ASD) | 2 |
| FVA/FFP/I | 2 |
| PPC/CDIE | 3 |
| M/SER/MO | 1 |
| M/SER/EOMS | 1 |
| USAID/Praia | 1 |
| USAID/N'Djamena | 1 |
| USAID/Accra | 1 |
| USAID/Conakry | 1 |
| USAID/Bamako | 1 |
| USAID/Monrovia | 1 |
| USAID/Niamey | 1 |
| USAID/Freetown | 1 |
| USAID/Lome | 1 |
| USAID/Ouagadougou | 1 |
| USAID/Yaounde | 1 |
| USAID/Banjul | 1 |
| USAID/Bissau | 1 |
| USAID/Dakar | 1 |
| IG | 1 |
| Assistant Inspector General for Audit | 1 |
| IG/PPP | 1 |
| IG/EMS/C&R | 12 |
| AIG/II | 1 |
| RIG/II/Dakar | 1 |
| RIG/A/Washington | 1 |
| RIG/A/Cairo | 1 |
| RIG/A/Manila | 1 |
| RIG/A/Karachi | 1 |
| RIG/A/Nairobi | 1 |
| RIG/A/Tegucigalpa | 1 |
| REDSO/WCA | 1 |