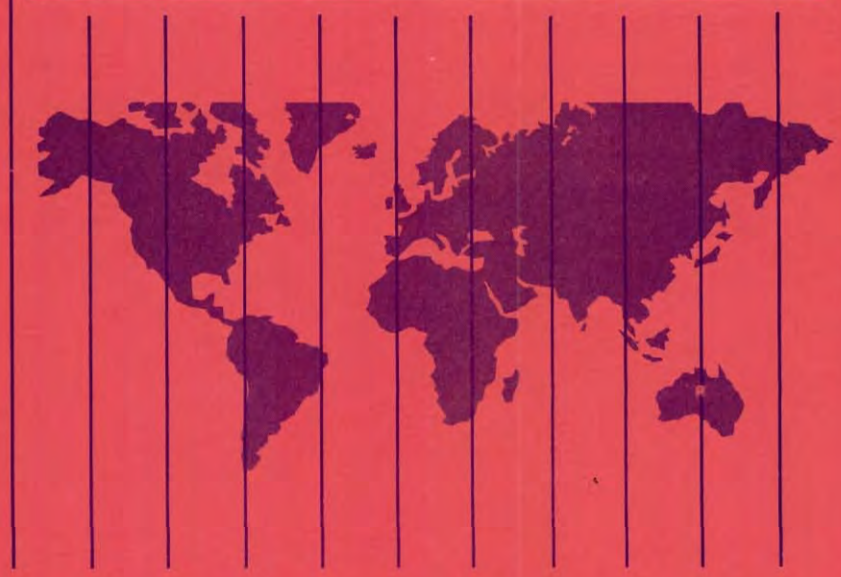
UNITED STATES
AGENCY FOR INTERNATIONAL DEVELOPMENT

THE INSPECTOR GENERAL

Memorandum Audit Report On Sudan
Southern Access Road Project No. 650-0036
Audit Report No. 3-650-85-12
April 29, 1985



Regional Inspector General for Audit
NAIROBI

MEMORANDUM

DATE April 29, 1985

FROM: Mervin F. Boyer, Jr., RIG/A/Nairobi

TO: Mr. William Brown, Director, USAID/Sudan

Mr. John Koehring, Director, REDSO/ESA

SUBJECT: Memorandum Audit Report On Sudan Southern Access Road Project No. 650-0036, Report No. 3-650-85-12

INTRODUCTION

The traditional route to Kenya from Sudan's southern region is south from Juba to Uganda and then east to Nairobi. With the fall of the Amin government in Uganda, and the ensuing chaotic conditions, the traditional Ugandan road link became disrupted. Critical food, fuel and other commodities ceased to flow. This prompted the president of the southern regional government's executive council to request U.S and other donor governments to provide construction assistance.

The project paper (PP) was approved on July 19, 1980 and the grant agreement between the Democratic Republic of Sudan (GOS) and AID was signed on August 30, 1980. The project's goals were to (a) stimulate social and economic development in southern Sudan and northwestern Kenya through improved, economical and reliable access to rural areas for delivery of basic governmental social and productive services and (b) establish an 80 to 90 percent all-weather direct link to international markets and the port of Mombasa in Kenya.

To help achieve the goals, the project was to construct 620 kilometers of road between Juba, Sudan and Lodwar, Kenya to a modified minimum commercial access standard. The project would fund (a) the services of a private contractor to build limited roads, bridges and culverts, (b) technical assistance personnel, (c) equipment and (d) spare parts. It would also provide fuel to the GOS's gravelling units.

The estimated cost of all activities to be financed was $29.0 million. Of this amount, AID was to provide $10 million and the European Economic Community (EEC) $13.7 million. The Government of Kenya (GOK) agreed to contribute $2.2 million and the GOS was to contribute $3.1 million. At the time of contract bidding, due to exchange rate devaluations, AID and EEC financing dropped to $20.9 million, however, AID's portion

remained at $10 million. As of September 30, 1984, a total of $8.7 million in AID funds had been spent. Contractor construction, which accounted for all but $30,000 of total project funding, was 96 percent completed.

AID's and EEC's share was to cover the contractor's cost of constructing structures, road diversions, weigh stations, and a portion of the cost of gravelling the existing road. The AID and EEC share of the gravelling cost was limited to technical assistance services (gravelling specialists and a master mechanic) and procurement of new equipment, spare parts and fuel. Kenya's and Sudan's contributions were to cover the remaining gravelling costs, the construction of temporary drifts, and the expense of routine maintenance during the construction period.

The Ministry of Public Works, Transport and Communications of Sudan's southern regional government (MPW/S), the Kenyan Ministry of Transport and Communications (MPW/K) the Joint Technical Committee (JTC)1/, the consulting engineering firm Norconsult and a private construction contractor George Wimpey International, Ltd., were the principal parties involved in the project. Wimpey was responsible for the construction work as well as providing specialists and commodities. Norconsult was responsible for supervising the construction, acting as an agent of the JTC, on behalf of the GOS and GOK. NORAD (Norwegian AID) financed the supervision as well as the design of the project. The GOK's Chief Engineer for Roads and Aerodromes acted as engineer to the JTC.

OBJECTIVES, SCOPE, AND METHODOLOGY

The purposes of our audit were to determine whether (a) the project was accomplishing its objectives, (b) effective use was being made of project resources, and (c) applicable laws, regulations and agreements were complied with.

The contractor's performance was scheduled to be reviewed by REDSO/ESA engineers with the results incorporated into our report. Accordingly, we agreed with REDSO/ESA officials to delay its issuance pending receipt of their technical appraisal. However civil strife in southern Sudan has virtually brought all development assistance to a halt, thus postponing indefinitely this effort.

1/ JTC is an advisory committee made up of representatives of Sudan and Kenya responsible for policy and technical decisions.

We reviewed records, reports and correspondence at USAID/Sudan in Khartoum and REDSO/ESA in Nairobi. We met with selected officials from the contractor and Norconsult and examined pertinent project documentation. We also held discussions with selected officials from both the GOS and GOK. We also visited the project site in southern Sudan.

The audit was made during September and October 1984, and focused on project activity during the period July 1980 to October 1984. Funds spent during this period were $8.7 million.

The audit was made in accordance with the Comptroller General's standards for audit of governmental programs and included such tests as were considered necessary in the circumstances.

RESULTS OF AUDIT

The Southern Access Road Project Failed To Meet Most Of Its Stated Purposes

The Southern Access Road project failed to meet most of its objectives. With funds running out, none of the three project purposes had been achieved. The primary reason for nonaccomplishment of the purposes was faulty project assumptions. The project paper assumed that the GOS would be able to provide road maintenance equipment and operators for two gravelling units; counterpart personnel; repair and maintenance engineers, technicians, and laborers; repair facilities for two gravelling units; and part of the fuel for operating the two gravelling units. In addition, the GOS was to construct drifts between the Kenya/Sudan border and Kapoeta, and to provide routine maintenance for the existing road and/or improved road segments. The GOS was unable to do any of this work because there was not enough equipment, operators or laborers to man or equip any gravelling units.

As a result, completion of the road will be dependent on a follow-on project No 650-0043 called Southern Regional Road Maintenance and Rehabilitation (SORMAR) and other donor assistance. We see some of the same pitfalls under the follow-on project as the Southern Access Road project such as lack of personnel, lack of foreign exchange to purchase fuel and spare parts and political and security problems. This project will have to be closely controlled to insure success or to keep further losses to a minimum.

In response to our draft report USAID/Sudan stated that they were in general agreement with the basic thrust of our narrative. They went on to state that as a result of the current political situation most development activities in southern Sudan are under review on a case by case basis. On the SORMAR project the contractor has been asked to develop alternative plans for implementation and training which take into account current restrictions on working in the southern region. Finally, the project committee will assess these plans against the project's original goals and objectives and recommend modifications for the project paper and implementation plan. Every quarter the committee will meet to assess progress toward achieving project objectives and will determine if continued investment by AID is justified. We believe that these actions make sense, are reasonable in the circumstances and obviate the need for a recommendation.

Appendix 1 and 2 contains the full text of USAID/Sudan and REDSO/ESA comments.

Discussion On Project Purposes, Planned Approach And Results

The project was to: (a) provide southern Sudan with an alternative gravel access route to international markets by a direct road link to Kenya; (b) provide isolated rural areas with improved access to public and private factors of production and social services; and (c) establish an institutional capability within the host countries to maintain the project road to minimum commercial access (MCA) standards.

To achieve these purposes, a number of separate but interrelated project components were to be undertaken. They were:

- construction of 48 minor structures, 8 major structures, 58 kms of diversion roads including a 30 kilometer new line across Kidep plain and two weigh stations by a private contractor;

- construction of stone drifts between Lokichokio and Kapoeta by GOS work crews;

- gravelling of 582 kms of existing road by GOS' forces and equipment, technical assistance in the form of a specialist, spare parts for the governments' existing equipment fleet (working and deadlined equipment) and fuel; and

- routine maintenance of the existing road between Lodwar and 40 km east of Juba by GOS maintenance crews.

The proposed implementation approach was to utilize GOK and GOS work crews to upgrade and gravel existing sections of the road together with sections of the realigned and drained road between structures. Assistance was to be given to the governments in the form of technical assistance and commodities to help them with their operations. Contractor Wimpey was selected to construct drainage structures, pipes, box culverts, bridges, and drifts, together with diversionary and realigned roads back to the existing road. Wimpey did what he was contracted to do. In fact he did more. To complete his construction road work, the contractor had to construct approaches to each structure site. Otherwise, it would have been impossible to get the needed equipment in place. The work on the approaches was to have been the GOS's responsibility but they did not do it.

The project design sought to reduce project expenditures by utilizing deadlined road construction/maintenance equipment in the Juba area. Designers estimated that spare parts purchased under the project would be sufficient to rehabilitate enough vehicles to equip two gravelling units, and/or utilize an existing unit of the Canadian International Development Agency/United Nations Development Program (CIDA/UNDP). The project provided for a mechanic to survey the various pieces of deadlined equipment and to prepare a list of spare parts necessary to put this equipment in working order. In late 1981, 15 months after the PP was approved, a mechanic was sent to southern Sudan for this purpose. He concluded that only six pieces of equipment could be repaired.

Furthermore, the GOS did not have the foreign currency to invest in new equipment. Without the equipment, it was impossible for three of the four components of the project to be accomplished. Implementation Letter No. 5, dated June 14, 1983, provided that the $1.8 million in project funds allocated to technical assistance, spare parts and fuel for the gravelling units should be applied to construct the drainage structure, pipes, culverts and bridges.

The project design also assumed that the GOS would be able to provide road maintenance equipment and that the World Bank would completely fund a second highway project to assist the GOS to strengthen its road maintenance capability. Unfortunately, this project never materialized. Although the project was proposed by the World Bank, it was not funded. Thus the GOS's capability to provide maintenance for the project was eliminated. To further aggravate the problem, CIDA/UNDP's gravelling unit was assigned to other roads.

According to USAID/Sudan and REDSO/ESA officials, other factors that contributed to the nonattainment of project objectives included: (a) the reopening of the traditional route to Sudan through Uganda from Kenya, thereby reducing the political pressure to have an alternative route to the port of Mombasa; and (b) the subsequent division of southern Sudan into three provinces, thereby further dividing what limited equipment the GOS possessed.

The project, as implemented, includes only the work under the Wimpey contract. A March 1983 draft evaluation report prepared by Louis Berger International, Inc. stated:

> "Even these works are insufficient to provide the structures necessary to meet the original project objective of providing all weather access including heavy trucks on an international route 90 percent of the year..."

As of late September 1984, when the contractor had completed 96 percent of the construction work, status reports indicated that the remaining portions of the road which were to be rehabilitated and maintained by the GOS had continued to deteriorate. Thus in the rainy season the roads are passable only by four wheel drive vehicles.

On the Kenya portion of the road, external donors have eliminated the need for the original inputs of the GOK because efforts are currently underway to construct and tarmac the 215 kilometers from Lodwar to Lokichokio. Also, external donor loan funds are available to complete the road between Lokichokio and the Sudan border. However, because of disputes over the actual border line, the legal aspects of funding that portion of the road remain unresolved.

Discussion On Follow-On Project

While the objectives of the Southern Access Road project have not been achieved, the SORMAR follow-on project was approved in July 1983. The purpose of the follow-on project is to improve and preserve critical access on primary roads within southern Sudan. Under this project, the uncompleted section of road between Juba and Kapoeta will be rehabilitated and maintained. However, the civil war in southern Sudan has virtually brought the follow-on project to a halt.

The remaining section of road between Kapoeta and Lokichokio is under consideration for funding by EEC but they are taking a

wait and see attitude in view of the current situation in southern Sudan. If the EEC elects to fund that section, an improved Southern Access Road would be completed provided AID completes the Juba to Kapoeta section.

We see the same pitfalls under the follow-on project such as lack of personnel, political disagreements between north and south, lack of foreign exchange to maintain equipment and provide fuel, security hazards delaying road work and lack of priority for an alternate route through Kenya now that the Uganda route appears secure.

Lesson Learned

There is an important lesson to be learned from this project. When the original design of a project is found to be faulty the project should be curtailed or stopped to keep potential losses to a minimum. For example, in October 1981 a mechanic surveyed the equipment to be used to equip 2 GOS gravelling units. He found the equipment couldn't be rehabilitated. Without this equipment the GOS could not equip 2 gravelling units, therefore this important element was lost. Yet 4 months later the Wimpey contract was signed to build the structures without a capability to grade or gravel between the structures.

The project could have been redesigned and scaled back in size so, at least, some sections of the road could have been completed. As it now stands, the $10 million could be of marginal utility without any sections of the road being completed on the Sudan side. The result is that none of the project purposes have been achieved. With a new design containing all the elements (culverts, bridges, gravelling and grading) at least some sections of the road could have been completed and some benefit would have been assured. In our view, the pressure to spend the money already obligated outweighed delaying the project to come up with a design that would have at least rehabilitated sections of the road. As it now stands the $10 million spent could be a total waste if the political and/or security problems in the region persist.

SOUTHERN ACCESS ROAD

USAID/Sudan's Comments to Draft Audit Report[1/]

"USAID is in general agreement with the basic conclusions of the subject audit, most importantly that, taken as a discrete activity, significant components of the project goal, purposes and outputs have not been met. While USAID can provide little additional insight into the contraints faced during several alternative conclusions in the audit's sections concerning original project design and implementation, we would suggest several alternative conclusions in the audit's sections concerning original project design, management decisions and follow-up implications. The purpose is to maximize the impact of the lessons learned section of the audit. USAID/Sudan remarks are limited to the sudan portion of the project.

Project design issues. The audit makes several references to faulty project design. We find the audit to have been generous in limiting its criticism of project design to the idea that the project's assumptions were faulty. It is our conclusion that the purpose(s) were overstated and thus the project oversold. There is no other way for accounting for the claim that the project would have established firmly an institutional capability to maintain the project road. Provisions of inputs to the project would not in and of itself have led to accomplishing such a purpose. The project was banking on participation by the World Bank Highway III to collaboratively establish a viable Southern Access Road. As the audit properly points out, the World Bank Highway III project was referred to as the GOS contribution. And without Highway III, GOS contribution was bound to flounder, particularly critical spare parts and repaired equipment for the GOS personnel to use.

This said, it would not be accurate to characterize the assumption of World Bank participation (or as put in the PP, GOS participation) as a faulty assumption. The World Bank had been very keen on providing highway assistance to southern Sudan as part of Highway III. Even during the development of SORMAR, the World Bank and GOS maintained that agreement on Highway III was imminent. Initially SORMAR, too, was to function parallel to the Highway III project. Indeed, only in July, 1983 did negotiations between GOS and the World Bank fall

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1/ USAID/Sudan's comments were sent by cable, therefore, corrections were required to correct transmission defects.

through. This required modifications in SORMAR to include those functions previously allotted to Highway III. There was really no way that the project designers for the Southern Access Road could have foreseen the falling through of negotiations on Highway III. The absence of Highway III -- or other donor financing to take up the slack as was done in the Kenya portion -- was perhaps the greatest reason why gravelling did not take place and why the road did not become transversable 90 percent of the time.

What we have without the World Bank contribution is a considerably more modest project and one which alone would have been of more limited value.

Project management. The audit's conclusion appears adament that the project should have been stopped when its faults in design and non-materializing of assumptions became apparent quote: To keep potential losses of taxpayer money to a minimum unquote. As a precept, USAID of course fully agrees with this. We have demonstrated this over the past two years by the fact that we have discontinued two projects, scaled down three and refused amendments or extensions to two others, all of which in one fashion or another suffered from poor or unfulfilled assumptions or over-design. The decision by the mission at the time to continue project implementation is complicated issue. It is certainly further complicated by the current security situation in southern Sudan which neither permits proper project implementation nor fosters economic development. The mission clearly knew at the time the SORMAR PP was being prepared that the Southern Access Road would need further support in the areas of maintenance and institutional development which was no longer promised by the World Bank. Indeed, the mission commissioned Louis Berger to re-evaluate the importance of the road and determine the costs of providing necessary inputs to get the road to an acceptable minimal standard. However, we believe it would be unfair and misleading to characterize the motivations of the mission at the time as quote pressured to spend the money already obligated, rather than delaying the project to come up with a reasonable design that contained all the necessary elements.

The judgement call involved derives from the view as to whether or not the road is necessary and the contract in effect contributes in a way which will eventually (with possible additional project) lead to completion of the objectives of a minimal standard road. In the case of the Southern Access Road, decision-makers at the time, both in USAID and GOS, clearly felt that the costs involved in delaying or discontinuing a contractor, then re-mobilizing another to do essentially, the same things under a subsequent more

comprehensive project was not cost effective. Their approach was to design the Southern Road Maintenance and Rehabilitation project to address head-on the problems of the south's institutional capacity for road maintenance, and to fill in where Highway III was to contribute -- things found lacking in the Southern Access Road. Again, a decision to proceed as USAID did at the time was clearly based on a belief that eventually, the Southern Access Road had to be upgraded, rehabilitated and maintained -- a belief still held by USAID today and supported by subsequent economic analyses.

As stated above, the discussion is certainly clouded by the current political and security situation in southern Sudan. If the situation stabilizes, then the issue of the value of the Southern Access Road, the Southern Road Maintenance and Rehabilitation project and the USAID's decision to proceed as it did will be based on the economic and social merits of the projects. If the current security situation persists, the sobering reality expressed in the final sentence on page 7 of the report is exactly accurate: All of our efforts will have been a waste. In this regard, USAID efforts on the Southern Access Road will join our other projects, those of other donors and most importantly heavy investments by southern Sudanese in their future as one big waste. Para. 5 describes USAID approach to decision making given contingencies of the security situation.

The importance of the project objectives. During development of the SORMAR project, an extensive economic analysis of all roads in southern Sudan was undertaken by Louis Berger International, Inc. This economic analysis confirmed the widely held assumption that the Wau-Juba-Kenya axis is the single most important transport link in the south. In particular, the economic analysis demonstrated a 58.2 percent IRR for Juba-Torit and a 24.4 percent IRR for Torit-Kapoeta. These were the two highest IRR's for any road section in southern Sudan. This clearly substantiates the fundamental premise of the project that the development and maintenance of the Southern Access Road is vital to southern Sudan's economic activity. Further, over the last year, USAID Sudan has been taking steps to develop a far-ranging development package for southern Sudan in the event a political solution is found and we and other donors are requested to assist in reconstruction. Virtually all possible project interventions -- short medium and long term -- point to the clearcut need for up-grading and maintaining by transport axis, again, one of the most important of which is the Juba-Kapoeta axis.

Clearly these conclusions are bolstered if the missing link between Kapoeta in Sudan and Lokichokio in Kenya is completed.

During the JTC meeting in November, EEC approached USAID/Sudan about the possibility of USAID providing local currencies to support completion of the Kapoeta-Lokichokio section if EEC were to provide the foreign exchange. While USAID stated that we looked positively on such a proposal, political events put any further analysis on hold.

Thus, if the political situation stabilizes, there is reason to believe that the EEC may still be interested in pursuing the Kapoeta-Lodwar project and that this will contribute even more favorably to the original premises in the Southern Access Road project that this link is highly economically viable.

The current situation and SORMAR. With the decline in the security situation, the USG has been forced to reduce the number of project personnel and activities to a minimum. In two of the three regions, Bahr el Ghazel and upper Nile, economic development is virtually unachievable at this time. As a result USAID had eliminated almost all activities, withdrew personnel and scaled down and combined positions to account for the reduced activity. Recognizing that the minimize was only a temporary measure and that some decision must be made precisely to assure that development monies were not being squandered, Embassy and USAID agreed to review the situation on April 10 at which time decisions would be made on a case by case basis on the future of all projects in southern Sudan.

On April 6, 1985, a new regime came to power with a strong public position that solving the insurgency in the south is, together with restoration of a civilian government and economic recovery, it's the top priority.

We recognize the possibility that under the government the situation could change. Thus any final decision about the fate of the projects in the south has been delayed and monitoring of the economic viability and justification for these projects takes on an added importance.

To ensure against wasting time and money several contingency plans for SORMAR have been developed and are being implemented. As mentioned above modifications in contractor level of effort have already been made and plans exist for further cutbacks should the situation improve.

The contractor has been asked to develop alternative plans for project implementation and training which take into account current restrictions on movement outside of Juba and existing training opportunities. Also the project manager and contractor are viewing the commodity procurement schedule in

light of implementation slowdown. The project committee will assess these plans against the original project goals and objectives and recommend modifications for the project paper and implementation plan. Every quarter the committee will specifically meet to assess progress toward achieving project objectives and address the question if continued investment by AID is justified."

UNITED STATES GOVERNMENT

MEMORANDUM

DATE: 14 March 1985

REPLY TO ATTN OF: For John M. Bell, Acting
John W. Koehring, Director, REDSO/ESA

TO: Melvin F. Boyer JR.

SUBJECT: Audit Report Comments - Southern Sudan Access Road (650-0036)

The following information is provided in response to your memo dated 28 February 1985. Comments, particularly any rebuttal, are difficult since so many aspects of the project have been, and are, questionable. This is also true of the current SORMAR project which is cited in the audit report. Issues, related to PP objectives/accomplishments/benefits/etc, are, therefore, prone to highly subjective individual reviews while the jury may still be out regarding eventual project merit. Admittedly, the prospects for attaining originally - desired project goals are not bright and may never be realized; hind-sight, however, when evaluating achievements, is a luxury which should emphasize any "lessons-learned" and cite changing conditions, but, equally, acknowledge the validity of assumptions made initially by those who were "on the dance floor where they could hear the music" at the time. The audit report does this in part.

Additionally, it must be recognized that engineering comments were supplied in response to the draft of this audit. Such comments have been incorporated, in great part, within the final version which negates further, extensive critique.

Comments:

A. Audit Report Conclusion: "The project should have been redesigned and scaled back in size so, at least, some sections of the road could have been completed." ---- "with a new design containing all the elements, at least certain sections of the road may have been completed and some benefit assured."

Comment re A: The cost of constructing, paving and draining the entire road was estimated at $250M in 1980. With EEC and AID as the only scheduled donors, and the fund availability set at $24.7, it was considered at that time, by those seeking an alternate supply route to Southern Sudan supplementing the closed route via Uganda, to be more economical if construction of the facility was in stages; i.e., by combining available

funds and constructing as many priority-one structures and diversion roads as possible. The latter would have included access to the fertile Kidepo Plains. Subsequently, it was envisaged, additional works would have opened all of Southern Sudan and Northern Kenya for development and as a direct access route to Juba from the Port of Mombasa. This approach was apparently viewed by the planners as most beneficial with available funds while, at the same time, opening the door for future investments by AID and other donors. The Wimpey contract acted as the catalyst for this with the result that Saudi Arabia, BADEA, and ADB entered the scene as donors on the road in Kenya with EEC expressing interest re further financing of the Sudan portion. The result of efforts, by all donors to date, have resulted in a significantly - improved Kenya portion and reduced driving time from Juba to Kapoeta in Sudan.

APPENDIX 3

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