OFFICE OF INSPECTOR GENERAL

AUDIT OF USAID/SUDAN'S MODERN ENERGY SERVICES PROGRAM

AUDIT REPORT NO. 4-650-11-003-P
DECEMBER 29, 2010

PRETORIA, SOUTH AFRICA

Office of Inspector General

December 29, 2010

MEMORANDUM

TO: USAID/Sudan Mission Director, William Hammink

FROM: Regional Inspector General/Pretoria, Christine M. Byrne /s/

SUBJECT: Audit of USAID/Sudan's Modern Energy Services Program (Report No. 4-650-11-003-P)

This memorandum transmits our final report on the subject audit. The report includes three recommendations to strengthen USAID/Sudan's Modern Energy Services Program. In finalizing the report, we considered your comments on our draft report and included those comments in Appendix II.

Based on management's comments and the supporting documentation provided, we consider that management decisions have been reached on all recommendations, with final action taken on Recommendation 3. Please provide the Office of the Chief Financial Officer's Audit Performance and Compliance Division with the necessary documentation to achieve final action on Recommendations 1 and 2.

I want to express my sincere appreciation for the cooperation and courtesy extended to my staff during the audit.

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Abbreviations

The following abbreviations appear in this report:

ADS	Automated Directives System
CPA	Comprehensive Peace Agreement
GoSS	Government of Southern Sudan
LBG	Louis Berger Group
NRECA	National Rural Electric Cooperative Association, International Ltd.
RIG/Pretoria	Regional Inspector General/Pretoria
YECO	Yei Electricity Cooperative

SUMMARY OF RESULTS

Sudan is a leading country for U.S. foreign assistance in sub-Saharan Africa and one of the U.S. Government's highest foreign policy priorities. Sudan's 2005 Comprehensive Peace Agreement, reached after decades of civil war, attempts to address regional disparities between underdeveloped regions and the capital, Khartoum. USAID/Sudan's primary goal is to promote the implementation of the peace agreement.

Among other things, the Comprehensive Peace Agreement (CPA) provides for a 6-year interim period during which Southern Sudan is to be governed by an autonomous entity called the Government of Southern Sudan (GoSS). After the interim period, Southern Sudan will decide in a referendum whether to become independent or to continue as a self-governing component of a unified Sudan. USAID's broad range of programs in Southern Sudan is intended to support the implementation of the CPA, with a long-term goal of assisting the peaceful and democratic transformation envisioned by the framers of the CPA.

Historical underdevelopment, followed by decades of war and neglect, has left Southern Sudan with minimal infrastructure. The GoSS Ministry of Energy and Mining has identified the electrification of market towns as a priority. Electrification is intended to encourage private sector investment.

As part of its continuing effort to help GoSS develop Southern Sudan's electricity sector, in August 2007 USAID signed a 4-year task order with the Louis Berger Group (LBG) to implement the Modern Energy Services Program at a total cost of $13,302,600.[1] The main goals of this program are constructing and implementing sustainable electricity generation and distribution systems in selected rural market towns of Southern Sudan. The primary subcontractor under this task order is the National Rural Electric Cooperative Association, International Ltd. (NRECA). According to LBG, as of August 31, 2010, $9.7 million had been obligated under this task order.

The Regional Inspector General/Pretoria (RIG/Pretoria) conducted this audit to determine whether the program was achieving its main goals of constructing and implementing sustainable electricity generation and distribution systems in Kapoeta, Maridi, and Yei (shown in the map on page 4). Auditors found that USAID/Sudan's Modern Energy Services Program was achieving its goals although delays had necessitated revising the implementation schedule.

[1] This task order was the third under a 5-year, $700 million indefinite quantity contract with the Louis Berger Group for the Sudan Infrastructure Services Project. An indefinite quantity contract provides for an indefinite quantity, within stated limits, of funding during a fixed period. Specific services are procured through task orders issued under the indefinite quantity contract.

The program was supporting Southern Sudan's electric system through both construction projects and technical assistance. The Yei electrification project, initiated under a previous cooperative agreement, had been turned over to the Yei Electricity Cooperative (YECO) (pictured below), and the program was providing continuing technical assistance to YECO.

Transformers changing the voltage and/or phase of electricity produced by generators at the Yei Electricity Cooperative in Southern Sudan. (Photo by RIG/Pretoria, February 2010)

Beneficiaries in Yei stated that electrification had improved their economic welfare and physical security. Also, an evaluation firm hired by USAID stated that residents had mentioned that some businesses in Yei were able to stay open longer hours since people felt more secure at night. Further, overall commercial activity in Yei had increased, partly because of the electrification project and partly because of a population increase.

Yet construction at Kapoeta and Maridi lagged, mostly because of disagreements at the outset between GoSS and implementing partners over the location of program sites. After construction began, mission officials were concerned that the program was not proceeding satisfactorily. After a site visit in July 2009, the USAID contracting officer's technical representative noted that the program was not meeting key performance benchmarks. For example, as of June 30, 2009, approximately two-thirds of the implementation period had elapsed but only about one-fifth of the budget had been spent. The mission asked for and received from LBG a revised plan for improving performance. In response, LBG officials acknowledged that although selected deliverables had not been completed in accordance with the original work plan, the officials did not believe that the delays had impacted the program's "critical path." LBG also stated that the mission had based its financial analysis on invoices that LBG had submitted rather than on construction amounts obligated, thus underestimating the portion of the budget that had been committed to the program.

During fieldwork, auditors found that electric utility construction was behind its original schedule but was progressing according to new revised timelines. Generators were expected to arrive on time according to the revised schedules. Electric poles and electrification equipment and materials were largely in place and ready to be installed. Auditors' observations of site preparations and construction in Kapoeta and Maridi showed satisfactory progress according to revised schedules, while a cost report as of December 31, 2009, did not indicate any cost overruns.

After audit fieldwork was completed, a USAID consultant indicated that the schedule had slipped an additional 2 months because of delays in the procurement and delivery of generators. The consultant stated that LBG and its subcontractor did not report these delays until June 2010. While the revised schedule calls for Kapoeta's generator to be installed and commissioned by November 26, 2010, and for Maridi's to be installed and commissioned by December 14, 2010, the consultant believed that the utilities would not be established and electric power available until early 2011.

Security concerns and poor roads in Southern Sudan hindered USAID/Sudan's monitoring of program activities. Unannounced visits were not possible because of the need to coordinate transportation arrangements with security contractors. The mission was able to monitor progress by reviewing weekly, monthly, and quarterly reports prepared by NRECA. While the mission's site visits would be more frequent under normal circumstances, the audit found that the visits made were effective; officials brought several program deficiencies to the contractor's attention and demanded prompt corrective action.

In addition to the delays and the limitations on the mission's ability to monitor activities, the audit disclosed these problem areas:

- The contractor did not provide adequate quality control (page 5).
- YECO lacked effective internal controls (page 6).
- The subcontractor did not manage beneficiary expectations effectively (page 6).

To improve the program's performance and chances of success, the audit recommends that USAID/Sudan:

1. Direct the prime contractor to develop a quality control plan for the program and develop procedures to monitor the prime contractor's implementation of that plan (page 5).

2. Devise and implement a plan to help ensure that YECO has adequate internal controls to promote its long-term sustainability (page 6).

3. Require that beneficiaries are informed about program milestones and timelines (page 7).

Detailed findings follow. Information on the audit scope and methodology appears in Appendix I, and the full text of management comments appears in Appendix II. Our evaluation of management comments is on page 8.

Map of Sudan. Maridi, Yei, and Kapoeta appear in the states of Western Equatoria, Central Equatoria, and Eastern Equatoria. Source: United Nations.

AUDIT FINDINGS

Contractor Did Not Provide Adequate Quality Control

According to the program's fiscal year 2010 work plan, LBG was to provide oversight, management, and quality control during implementation. Despite this requirement, LBG was not actively performing quality assurance of work done by its subcontractor—specifically, the subcontractor's procurements of materials like those shown below. Specifications for procurements were set in work plans. NRECA determined whether the materials ordered and delivered were in accordance with those specifications, with little or no review by LBG.

Electrification materials and electric poles like these in Kapoeta and Yei are subject to quality assurance by the prime contractor. (Photos by RIG/Pretoria, February 2010)

LBG has generally maintained a hands-off approach to managing NRECA, intervening only when NRECA has had problems dealing with GoSS. Although LBG assigned an additional staff member to the program in response to concerns about delayed implementation that the mission voiced during its July 2009 site visit, LBG has focused on activities under other task orders of the Sudan Infrastructure Services Project. Mission officials stated that NRECA was managing the program with very little oversight from LBG. For example, an NRECA engineer in Kapoeta stated that NRECA determined the quality of the electrification materials and equipment procured, with no quality assurance functions provided by LBG. Because LBG was focused on other activities in Sudan, such as construction of the Juba-Nimule Road, it did not fulfill its technical oversight responsibilities under this program. Without adequate oversight, management, and quality control during the implementation of program activities by the prime contractor, USAID cannot be sure that the quality of work meets USAID's standards and beneficiaries' expectations.

> ***Recommendation 1.*** *We recommend that USAID/Sudan (1) direct the Louis Berger Group to develop and implement a quality control plan for Modern Energy Services Program activities; and (2) develop and implement policies and procedures for monitoring the Louis Berger Group's quality control activities.*

Yei Electricity Cooperative Lacked Effective Internal Controls

To help ensure that USAID's programs are successful instruments of U.S foreign policy, the Agency published *Nine Principles of Development and Reconstruction Assistance.* In short, the principles list the characteristics of successful assistance programs necessary to achieve various development objectives such as economic growth and improved governance.

Sustainability—designing programs so that their impact endures—is one of those nine core principles of development and reconstruction assistance. A critical element of sustainability is proper stewardship of financial assets, which requires a well-designed accounting system backed by effective internal controls. The *Standards for Internal Control in the Federal Government*, published by the U.S. Government Accountability Office, contains guidance on establishing and maintaining effective controls—for example, by segregating key duties and responsibilities to reduce the risk of error or fraud. For YECO, key duties include authorizing, processing, and recording transactions, as well as maintaining custody of related assets. YECO management's responsibilities include being accountable to an outside authority that reviews the cooperative's operations and finances.

Despite the necessity of effective internal controls to sustain program impact, the audit disclosed that YECO lacked such controls. For example, during a site visit, the audit team observed little segregation of duties in accounting functions. Furthermore, no outside authority was reviewing and approving YECO's electricity generation and distribution policies and related financial operations.

Insufficient internal controls existed for several reasons. First, YECO's small staff did not permit adequate segregation of duties. Furthermore, members of the board of directors that would normally oversee the cooperative's management had not yet been sworn in. Thus, the cooperative did not have an independent oversight system or other necessary internal controls in place to help ensure the program's sustainability.

> ***Recommendation 2.*** *We recommend that USAID/Sudan develop and implement a plan for establishing adequate internal controls at the Yei Electricity Cooperative in order to promote its long-term sustainability.*

Subcontractor Did Not Manage Beneficiary Expectations Effectively

According to USAID's *Nine Principles of Development and Reconstruction Assistance*, partnership is another principle crucial to the success of U.S. foreign assistance. Partnership entails close collaboration between USAID and the governments and communities it assists. Part of this close collaboration involves informing stakeholders of estimated dates for completion. However, the residents and county executives of Maridi did not know when their town would get electricity. Those interviewed in February 2010 said they had expected to have electric power by January 2010 after a 1-kilometer street-lighting ceremony was held in September 2009 (shown below). Maridi residents still had not received electricity 1 year after this demonstration, primarily because of the delays in generator procurement and delivery discussed previously.

Residents of Maridi gather and circulate under 1 kilometer of demonstration street lighting. (Photo by RIG/Pretoria, February 2010)

According to the NRECA program manager, NRECA did not inform community stakeholders because it was too early to give specific timelines. The manager explained that divulging specific timelines would cause the community to hold the implementers to such dates unreasonably. This explanation, however, is contrary to the principle of partnership in effective foreign assistance. In July 2009, a USAID official informed the prime contractor that "the officials for Maridi County complain of project delays and lack of information." Despite this notification, Maridi officials and residents still had not been informed of program timelines by the subcontractor as of February 2010. During audit fieldwork, USAID officials were unaware that the community still lacked this information.

Effective partnership calls for information—including schedule delays and revisions—to be shared early and often with the governments and communities being assisted. A USAID consultant informed the audit team in September 2010 that, in a step toward strengthening the partnership between USAID and its beneficiaries, mission and contractor officials had traveled to Maridi to launch a community awareness campaign.

Nevertheless, because implementers did not share information with the community in a timely manner, beneficiaries were left with unreasonable expectations produced by the street-lighting ceremony. Through discussions with residents of Maridi, the auditors found that frustrations had developed in the community when expectations were not met, potentially reducing some of the public diplomacy benefits of U.S. foreign assistance. Consequently, the audit makes the following recommendation.

> ***Recommendation 3.*** *We recommend that USAID/Sudan require the Louis Berger Group to confirm in writing that its subcontractor, National Rural Electricity Cooperative Association, regularly informs residents about program status.*

EVALUATION OF MANAGEMENT COMMENTS

In its response to the draft report, the mission agreed with all three recommendations. The mission's comments are summarized below, followed by the audit team's evaluation of those comments.

Recommendation 1. The audit recommended that the mission direct the Louis Berger Group to develop and implement a quality control plan for Modern Energy Services Program activities, as well as institute its own policies and procedures to monitor the Louis Berger Group's quality control activities. In response, the mission stated that it will instruct LBG to prepare a quality control/quality assurance plan for Task Order 3. In addition, the mission stated that it expected to develop policies and procedures for monitoring LBG's quality control activities by January 31, 2011. Accordingly, a management decision has been reached on Recommendation 1.

Recommendation 2. The audit recommended that the mission develop and implement a plan to establish adequate internal controls at the Yei Electricity Cooperative. The mission responded that it would assess YECO's financial status before December 31, 2010, to inform the development of internal controls that will be reviewed by the mission controller prior to implementation. In a subsequent communication, the mission indicated it plans to complete implementation by September 30, 2011. Accordingly, a management decision has been reached on Recommendation 2.

Recommendation 3. The draft report recommended that the mission require the Louis Berger Group to confirm in writing that its subcontractor regularly informs residents about program status and that the Louis Berger Group performs site visits to verify that residents are being kept informed. In response, the mission stated that stakeholder consultation meetings were held in September and October 2010 in Maridi and Kapoeta. Furthermore, the mission indicated it will require monthly updates from LBG on information sharing between its subcontractor and residents in Maridi and Kapoeta. Because the documents provided by the mission made it evident that residents were being kept informed of program status, we eliminated the second part of the recommendation that LBG perform site visits to confirm this fact. Therefore, on the basis of management's comments and the supporting documentation provided, a management decision has been reached and final action taken on Recommendation 3.

SCOPE AND METHODOLOGY

Scope

The Office of Inspector General conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions in accordance with our audit objective. We believe that the evidence obtained provides that reasonable basis.

Our audit objective was to determine whether USAID/Sudan's Modern Energy Services Program was achieving its main goal of constructing and implementing sustainable electricity generation and distribution systems. Audit fieldwork was conducted at USAID/Sudan from February 16 to March 5, 2010. The audit spanned program implementation, from start-up in 2007 to the conclusion of fieldwork. The program was Task Order 3 under the Sudan Infrastructure Services Project indefinite quantity contract, which built on a prior cooperative agreement with NRECA. Task Order 3 has a total cost-plus-fee budget ceiling of $13,302,600. As of November 2009, $9.7 million had been obligated under this task order, which remained constant through August 2010. Our audit focus was more procedural than financial, although we considered the reasonableness of spending in relation to accomplishments to date.

In planning and performing the audit, the audit team assessed the risk of illegal acts, including fraud, in the mission's Modern Energy Services Program. In conjunction with this assessment, we also assessed management controls for ensuring compliance with applicable laws, regulations, and policies regarding the Modern Energy Services Program.

Specifically, we reviewed the following:

- Reports required under the Federal Managers' Financial Integrity Act, Public Law 97-255 of 1982 (as codified in 31 U.S.C. 1105, 1113, and 3512)
- Office of Management and Budget Circular A-123, Management's Responsibility for Internal Control
- Implementing partner contracts and subcontracts
- Performance measures and results
- Certifications by the contracting officer's technical representative
- Trip reports prepared by mission officials and consultants
- Correspondence between officials from USAID and LBG
- Quarterly progress reports prepared by LBG
- Cost estimates and projections
- The SISP (Sudan Infrastructure Services Project) Market Town Electrification Survey Report, prepared by NRECA

We also conducted interviews with current and former officials of USAID/Sudan, LBG, NRECA, the GoSS Ministry of Energy and Mining, and a Deloitte & Touche consultant employed by USAID/Sudan to assist GoSS with the electricity legislation. Audit fieldwork included visits to the LBG/NRECA offices, the Ministry of Energy and Mining and Ministry of Legal Affairs, and NRECA's modern energy program plant locations and offices in Kapoeta, Yei, and Maridi. We also visited the offices of the county commissioners in those towns. We conducted additional analysis and interviews by e-mail at the offices of RIG/Pretoria on our return from Sudan.

Methodology

To answer the audit objective, we first interviewed mission officials to determine the main goals of USAID/Sudan's Modern Energy Services Program. We then reviewed pertinent documentation such as the contractor's performance management plan and the USAID/Sudan strategy statement. Next, we determined the best method to assess whether those main goals were being achieved. Since the program had not been finished, the performance indicators designed to measure the impact on beneficiaries were of only limited utility in answering the audit objective. As a result, we concluded that interviews with beneficiaries in Yei, in conjunction with observations of the completed plant there, would provide a good basis for our assessment of achievement of the mission's goals under Task Order 3. Regarding the activities in Kapoeta and Maridi, we decided that reviewing the agreed-on work plans, timelines, and costs, as well as the construction in progress at these sites or preparations for construction, supplemented by interviews of implementing partners and local officials, would provide evidence for answering the audit objective. Therefore, we traveled to the sites in Kapoeta, Yei, and Maridi to undertake those observations and interviews.

We also interviewed an official from the Ministry of Energy and Mining, as well as a consultant from Deloitte & Touche hired by USAID/Sudan for his knowledge of the progress of the legal framework for rural electrification in Southern Sudan. Finally, we examined quarterly reports prepared by LBG, trip reports completed by mission officials, and program reports and timelines prepared by NRECA.

Given the unfinished status of the Kapoeta and Maridi electric plants, we determined that assessments of the implementation schedules, costs to date, and projected costs would be of central importance to users of this report. To this end, we reviewed work plans and cost estimates. We also interviewed various mission and NRECA officials. Regarding the utility plant construction and procurement of electrification equipment and materials for Kapoeta and Maridi, we examined the structures, electrification materials, and equipment at these locations, as well as documentation at the mission, for significant items—such as vehicles—already ordered or approved for payment. We also reviewed timelines and discussed with engineers their estimation of cost performance to determine whether activities would stay within budget.

In addition to the documents named above, we used the following sources to develop criteria or provide additional information contained in the report:

- USAID's indefinite quantity contract with LBG and Task Order 3 issued under the contract
- LBG's subcontract with NRECA
- Executive Order 13224
- Automated Directives System (ADS) Chapter 308, "Grants and Cooperative Agreements with Public International Organizations"
- ADS 302, "Direct Contracting," and ADS 310, "Source, Origin, and Nationality"
- USAID Policy—*Nine Principles of Development and Reconstruction Assistance*

Because of the nature of the audit objective, we did not establish a materiality threshold, but rather utilized auditor judgment in answering the objective.

MANAGEMENT COMMENTS

USAID | SUDAN
FROM THE AMERICAN PEOPLE

Date: November 09, 2010

To: Regional Inspector General/Pretoria, Christine M. Byrne

From: USAID/Sudan Mission Director, William Hammink /S/

Subject: Audit of USAID/Sudan's Modern Energy Services Program (Report No. 4-650-11-00X-P)

We would like to thank the RIG/Pretoria team for preparing an audit report that is thorough and will strengthen USAID/Sudan's Energy infrastructure activities. USAID/Sudan is pleased to provide comments on the report including the position of USAID/Sudan on the recommendations as stated below:

> ***Recommendation 1. We recommend that USAID/Sudan (1) direct the Louis Berger Group to develop and implement a quality control plan for Modern Energy Services Program activities; and (2) develop and implement policies and procedures for monitoring the Louis Berger Group's quality control activities.***

USAID/Sudan accepts this recommendation and will instruct LBG to prepare a Quality Control/Quality Assurance (QC/QA) plan for Task Order 3 that will be reviewed and approved by USAID. In addition to the QC /QA plan, USAID will develop policies and procedures for monitoring the quality control guidelines. We have hired a local Sudanese Engineer who together with our Senior Infrastructure Adviser will closely follow up the final installations and commissioning of the electric utilities. The development of the policies and procedures is expected to be complete by January 31, 2011.

> ***Recommendation 2. We recommend that USAID/Sudan develop and implement a plan for establishing adequate internal controls at the Yei Electricity Cooperative in order to promote its long-term sustainability***

USAID/Sudan accepts this recommendation and is already placing more emphasis on the sustainability and internal controls. The USAID Sudan Senior Economist is assisting the Economic Growth Office in preparing requirements for internal controls of the utilities. The utility management internal controls will be reviewed by our Controller before implementation. To achieve this, USAID will before the end of December 2010, carry out an assessment of YECO's financial status that will inform the direction of these financial controls.

> ***Recommendation 3. We recommend that USAID/Sudan require the Louis Berger Group to confirm in writing that its subcontractor, National Rural Electricity Cooperative Association, regularly informs residents about program status and***

that the Louis Berger Group itself perform site visits to verify that residents are being kept informed

USAID/Sudan accepts this recommendation and is happy to report that the LBG/ NRECA team have already started implementing this recommendation based on discussions held with the RIG Audit team in May 2010. In September 2010 and October 2010, NRECA organized stakeholder consultation meetings in Maridi and Kapoeta respectively. During these meetings, stakeholders were educated on the implementation program as well as options for utility service provider formation and management. We shall require monthly updates from Louis Berger on information sharing between NRECA and stakeholders /local communities in Maridi and Kapoeta. Mission requests closure of this recommendation upon issuance of the report.

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