



OIOS

Office of Internal Oversight Services

INTERNAL AUDIT DIVISION

AUDIT REPORT

Audit of the management of engineering projects and services in UNMIS

**Engineering works were substantially delayed
due to ineffective monitoring by the Mission of
outsourced contracts**

4 August 2009

Assignment No. AP2008/632/06

United Nations  Nations Unies

INTEROFFICE MEMORANDUM

MEMORANDUM INTERIEUR

OFFICE OF INTERNAL OVERSIGHT SERVICES - BUREAU DES SERVICES DE CONTRÔLE INTERNE

INTERNAL AUDIT DIVISION - DIVISION DE L'AUDIT INTERNE

TO: Mr. Ashraf Jehangir Qazi
A Special Representative of the Secretary-General
United Nations Mission in Sudan

DATE 4 August 2009

REFERENCE IAD: 09-02722

FROM: Fatoumata Ndiaye, Acting Director
DE: Internal Audit Division, OIOS



SUBJECT: **Assignment No. AP2008/632/06 - Audit of the management of engineering projects and services**
OBJET: **in UNMIS**

1. I am pleased to present the report on the above-mentioned audit.
2. In order for us to close the remaining recommendations, we request that you provide us with the additional information as discussed in the text of the report and also summarized in Annex 1.
3. Please note that OIOS will report on the progress made to implement its recommendations, particularly those designated as high risk (i.e., recommendation 3), in its annual report to the General Assembly and semi-annual report to the Secretary-General.

cc: Mr. Nicolas Von Ruben, Acting Director Mission Support, UNMIS
Mr. Farid Zarif, Chief of Staff, UNMIS
Mr. James Boynton, Chief Integrated Support Services, UNMIS
Mr. Swatantra Goolsarran, Executive Secretary, UN Board of Auditors
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INTERNAL AUDIT DIVISION

FUNCTION

"The Office shall, in accordance with the relevant provisions of the Financial Regulations and Rules of the United Nations examine, review and appraise the use of financial resources of the United Nations in order to guarantee the implementation of programmes and legislative mandates, ascertain compliance of programme managers with the financial and administrative regulations and rules, as well as with the approved recommendations of external oversight bodies, undertake management audits, reviews and surveys to improve the structure of the Organization and its responsiveness to the requirements of programmes and legislative mandates, and monitor the effectiveness of the systems of internal control of the Organization" (General Assembly Resolution 48/218 B).

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EXECUTIVE SUMMARY

Management of engineering projects in UNMIS

The Office of Internal Oversight Services (OIOS) conducted an audit of the management of engineering projects and services in United Nations Mission in Sudan (UNMIS). The overall objective of the audit was to assess the adequacy and effectiveness of the management of engineering projects. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

Overall, improvement was needed over the management of engineering projects. The audit found that:

- Project approval was not adequately documented and there was no project review committee in place to monitor the implementation of engineering projects, which in some cases were considerably delayed;
- The Engineering Section has adequate capacity for maintenance works, however, it is not well resourced to manage other engineering projects;
- The Mission does not have an adequate project tracking system for the monitoring and reporting on engineering projects;
- Some contractors were awarded two to three projects at one time without properly assessing their capabilities to implement them and to ensure that earlier projects had been satisfactorily completed.

OIOS has made recommendations to address the issues identified during the audit to further strengthen existing controls and contribute towards the improvement of engineering services in UNMIS.

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I. INTRODUCTION

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the management of engineering projects and services in United Nations Mission in Sudan (UNMIS). The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.
2. The Engineering Section is headed by a civilian Chief Engineer (CE) at the P-5 level, and assisted by a Force Engineer (FE). The CE reports to the Director of Mission Support (DMS) through the Office of the Chief Integrated Support Services (CISS).
3. UNMIS's area of operation is divided into six sectors and 18 team sites. The Engineering Section has a representative at each of the six sectors responsible for supervising projects in team sites. Civilian engineers are assisted by military engineering components at the Mission's Headquarters and at the sector levels.
4. The Engineering Section comprises of 65 international and 148 national civilian staff.
5. The budget and actual expenditure of the Engineering Section for the fiscal years 2006-2007 and 2007-2008 are as shown in Table 1 below:

Table 1: Engineering Section operating budget

Fiscal year	Budget (\$000)	Actual Expenditure (\$000)	Difference (\$000)	Percentage of Mission's annual Operating Budget
2006/2007	61,623	57,983	3,640	12%
2007/2008	39,527	36,757	2,770	11%
Total	101,150	94,740	6,410	

6. Comments made by UNMIS are shown in *italics*.

II. AUDIT OBJECTIVES

7. The main objective of the audit was to assess the adequacy and effectiveness of the management of the implementation and delivery of engineering projects, and in particular to determine whether projects were properly planned and completed in a timely manner.

III. AUDIT SCOPE AND METHODOLOGY

8. The audit covered projects initiated in fiscal years 2006/2007 and 2007/2008 and also reviewed current practices and procedures. The main areas of focus included project planning, implementation, supervision, monitoring and reporting.
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9. The auditors reviewed relevant documents, interviewed key personnel, performed tests of controls and visited selected project sites in Khartoum, Juba, El Obeid and Ed Damazin.

IV. AUDIT FINDINGS AND RECOMMENDATIONS

A. Project review

10. According to current practice, the CISS and the CE review each project proposal in consultation with the DMS. Subsequently, the CISS, CE and DMS makes a presentation to the senior management team to solicit comments on the proposal before the project is added to the list of Mission priority projects (MPPs). The CISS, through the CE, approves the MPPs.

11. Although project proposals are presented to senior management as indicated above, there was no formal mechanism for the monitoring of MPPs by senior management. In contrast, there was a Project Review Committee at the senior management level for Quick Impact Projects (QIPs), which individually have much lower values compared to engineering projects.

Recommendation 1

(1) The UNMIS Office of Mission Support should establish a Project Review Committee to monitor and report on engineering projects.

12. *UNMIS accepted recommendation 1 and stated that a small committee with representatives from the Procurement and Engineering Sections and the Office of the DMS and CISS will be established to formalize and document a high level review of projects, as is done by the Project Review Committee for QIPs. Recommendation 1 remains open pending confirmation that an adequate Project Review Committee has been established.*

B. Training programme for skills upgrade

13. To support effective and efficient engineering activities, UNMIS requires experienced engineers and project officers. The audit observed that while the Engineering Section is adequately resourced to undertake maintenance service projects, it lacks sufficiently experienced staff to manage other types of projects, and did not have any strategy to build its capacity in this area. For instance, the Engineering Section does not have a training programme for upgrading the skills of engineering staff or a forum to share ideas based on best practices. In OIOS' view, conducting periodic professional forums and workshops, in consultation with the Mission's Integrated Training Centre will assist in the development of staff members and will enhance the management of projects. It will also be an opportunity for those involved in managing projects to share ideas and up-date others on latest developments.

Recommendation 2

(2) The UNMIS Office of Mission Support should ensure that the Engineering Section in consultation with the Mission's Integrated Training Centre develops a training programme for staff to enhance their skills to manage and supervise engineering projects.

14. *UNMIS accepted recommendation 2 and stated that professional project management courses are costly and difficult to find in Khartoum and Juba. Therefore an efficient training for concerned staff may only be available in the next budget exercise. Meanwhile, the Engineering Section will provide on-the-job training to staff and will seek assistance from the Integrated Mission Training Centre in the provision of project management training. Recommendation 2 remains open pending confirmation that adequate training has been provided to enhance the capacity of staff of the Engineering Section to manage projects.*

C. Planning, monitoring and reporting the implementation of projects

15. At the start of the budget year, the Engineering Section in Khartoum and the engineering officers in sectors submit their work plans within the framework of the MPPs to the CE. These projects are evaluated and incorporated into the overall work plan for the Engineering Section and for the preparation of the engineering budget. For fiscal periods 2006/2007 and 2007/2008, the Engineering Section had 229 projects in its work plan of which 43 was outsourced.

Project monitoring and reporting

16. The Mission's operating activities in Sudan are wide spread and the Engineering Section is required to provide timely and accurate information about all aspects of engineering projects to Mission's senior management. However, the responsibility for the monitoring and reporting on engineering projects has not been properly assigned. As a result, none of the units of the Engineering Section including the Planning and Design Unit and the Construction Unit undertake these responsibilities. The Mission also lacks a central database for tracking, monitoring and reporting on projects.

17. The absence of a dedicated unit to maintain adequate and reliable records and information may prevent the Mission from adequately accounting for its projects.

Recommendation 3

(3) The UNMIS Office of Mission Support should ensure that the Engineering Section establishes a central database for monitoring and reporting on the status of projects.

18. UNMIS accepted recommendation 3 and stated the Engineering Section has an Operational Centre that collects all data relating to project implementation and monitors and reports on engineering activities. However, a definitive monitoring system will be added to improve recording and reporting of work-in-progress to ensure timely processing of requisitions and delivery of materials by contractors. A standard weekly brief will be prepared for the Project Review Committee. Recommendation 3 remains open pending OIOS verification that an adequate tracking system has been implemented.

D. Delays in implementing outsourced projects

19. During the period under review, the Engineering Section outsourced 43 projects. OIOS' review of contract documents relating to the outsourced projects identified that some of them had excessive time over-runs in their implementation, as shown in Table 2.

Table 2: Engineering Projects with time over-run in UNMIS

Name of Contractor	Project Description	Contract/PO Number	Contract price (\$)	Time over-run (Months)
El Barkal Eng Ltd	4 units of 2 storey pre-engineered steel frame buildings in Khartoum	UNMIS/CON/07/03	1,690,984	18
Merit Group	3 Units of 2 storey pre-engineered steel frame buildings in Khartoum	UNMIS/CON/07/038	1,516,762	19
Merit Group	Perimeter fencing in Ed Damazin Compound	UNMIS/CON/07/008	606,404	12
Gogni Rajope Construction (Kenya) limited	Construction of foundation for the aviation hangers in Juba	MIS/07/1189	755,814	17
Seferian & Co Ltd	Designs, manufacture, transport, erect and test 3 No. electric traction passenger lifts for Building 1 in Khartoum	POMIS07/898	130,840	16

20. The delays in part were attributed to the fact that multiple projects were given to the same contractors whose track record for timely project completion had not been established, as shown in Table 3.

Table 3: Vendors with multiple projects

Contractor	Projects	Duration	Contract value (\$)
El Barkal Eng Limited	Construction of 4 Units, 2 storey high living and office accommodation in Khartoum.	February-August 2007. Incomplete as at February 2009.	1,690,984
	Supply and delivery of sand to eight team sites and Sectors	April-May 2008. Incomplete as at February 2009.	363,200
	Supply and delivery of red bricks to 8 Team Sites and Sectors	June-August 2008. Incomplete as at February 2009.	815,000
Merit Group	Design and construction of 4 Units 2 storey high living and office accommodation in Khartoum.	January-July 2007. Incomplete as at February 2009.	1,516,762
	Perimeter fencing in Ed Damazin Compound	August-November 2006 Project completed in December 2007 after 12 months delay.	606,404
Softway International company (Khartoum)	Supply and delivery of aggregate for concrete works in Ed Damazin	June-August 2008 Incomplete as at February 2009.	305,250
	Supply and delivery of standard kiln fired bricks-Ed Damazin	June-September 2008. Incomplete as at February 2009.	131,900
	Construction of concrete slabs for 3 type B hangers at El Obeid	June-December 2008. Completed in March 2009.	500,000

21. The awarding of multiple projects to the same contractor without ensuring that the previous projects have been satisfactorily completed could affect the quality and early completion of projects.

22. Moreover, contractors including El Balkal Engineering Ltd and Softway International Company accepted to supply construction materials to South Sudan. When they were not able to deliver them in a timely manner, they provided excuses relating to insecurity, bad weather and poor roads. These conditions should have been well known to the contractors, as one of the bidding conditions was for bidders to be familiar with the local conditions, and take these into account in the offer submitted by them.

23. OIOS also observed that the liquidated damages provided for in the contracts were not enforced. The Chief, Procurement Officer stated that enforcement of liquidated damages is reviewed on a case-by-case basis, and said that there were challenges relating to logistics, as well as stringent government regulations regarding customs clearance that causes delays, which is beyond the control of the contractor. OIOS however noted that project files did not have an adequate record of the contractor's performance and the justification as to why the Mission was not applying the liquidated damages clause.

Recommendation 4

(4) The UNMIS Office of Mission Support should ensure the Engineering Section documents in the respective project files the contractor's performance and also when delays have occurred, document the reasons for not invoking the liquidated damages clause.

24. *UNMIS accepted recommendation 4 and stated that the Engineering Operations Centre will collect all data relating to project implementation and document the performance of contractors. Recommendation 4 remains open pending OIOS verification that contractors' performance is adequately documented, as well as reasons for not invoking the liquidated damages clause.*

E. Filing and records keeping

25. The filing system in the Engineering Section was inadequate. For example, request for information on projects were difficult to obtain. Some of the information was traced to the Construction Unit while the Planning and Design Unit also kept documents relevant to their work.

26. The Engineering Section in Khartoum requested sector engineers for updated information on projects. However, this information was not readily available. As a result, there are no case files in the Engineering Section with complete copies of all contract documents, scheduling and monitoring reports, work-in-progress reports and certifications. The lack of updated project files in a centralized location may lead to loss of important documents and a lack of an institutional record of all projects.

27. Moreover, the projects and maintenance services undertaken by the Engineering Section had not been entered into Galileo. OIOS found over 180 hard copies of maintenance work orders filed in the Building Maintenance Section in Khartoum, Juba, El Obeid and Ed Damazin that had not been entered into Galileo.

28. The Engineering Section may be unable to account for the actual value of all projects and risk losing hard copies of these maintenance work orders if they are not recorded in Galileo and properly archived.

Recommendation 5

(5) The UNMIS Office of Mission Support should ensure that the Engineering Section records all engineering projects and jobs executed directly by the Building Maintenance Section in Galileo.

29. *UNMIS accepted recommendation 5 and stated that the Engineering Section will record all projects into Galileo to capture total cost and input. Recommendation 5 remains open pending OIOS verification that the Engineering Section has recorded all projects into Galileo.*

V. ACKNOWLEDGEMENT

30. We wish to express our appreciation to the Management and staff of UNMIS for the assistance and cooperation extended to the auditors during this assignment.

STATUS OF AUDIT RECOMMENDATIONS

Recom. no.	Recommendation	Risk category	Risk rating	C/O ¹	Actions needed to close recommendation	Implementation date ²
1	The UNMIS Office of Mission Support should establish a Project Review Committee to monitor and report on engineering projects.	Governance	Medium	0	Confirmation that an effective Project Review Committee has been established.	September 2009
2	The UNMIS Office of Mission Support should ensure that the Engineering Section in consultation with the Mission's Integrated Training Centre develops a training programme for staff to enhance their skills to manage and supervise engineering projects.	Human Resources	Medium	0	Confirmation that adequate training has been provided to enhance the capacity of staff of the Engineering Section to manage projects.	Not provided
3	The UNMIS Office of Mission Support should ensure the Engineering Section establishes a central database for monitoring and reporting on the status of projects.	Operational	High	0	Verification that an adequate tracking system has been implemented.	October 2009
4	The UNMIS Office of Mission Support should ensure the Engineering Section documents in the respective project files the contractor's performance and also when delays have occurred, document the reasons for not invoking the liquidated damages clause.	Compliance	Medium	0	Verification that contractors' performance is adequately documented, as well as reasons for not invoking the liquidations clause.	October 2009
5	The UNMIS Office of Mission Support should ensure that the Engineering Section records all engineering projects and jobs executed directly by the Building Maintenance Section in Galileo.	Compliance	Medium	0	Verification that the Engineering Section that all projects have been recorded into Galileo.	December 2009

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1. C = closed, O = open
 2. Date provided by UNMIS in response to recommendations.