



INTERNAL AUDIT DIVISION

REPORT 2016/053

Audit of engineering and construction activities in the African Union-United Nations Hybrid Operation in Darfur

Overall results relating to the effective management of engineering and construction activities were initially assessed as partially satisfactory. Implementation of three important recommendations remains in progress

FINAL OVERALL RATING: PARTIALLY SATISFACTORY

26 May 2016

Assignment No. AP2015/634/06

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AUDIT REPORT

Audit of engineering and construction activities in the African Union-United Nations Hybrid Operation in Darfur

I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of engineering and construction activities in the African Union-United Nations Hybrid Operation in Darfur (UNAMID).
2. In accordance with its mandate, OIOS provides assurance and advice on the adequacy and effectiveness of the United Nations internal control system, the primary objectives of which are to ensure (a) efficient and effective operations; (b) accurate financial and operational reporting; (c) safeguarding of assets; and (d) compliance with mandates, regulations and rules.
3. The Building Maintenance and Construction Cell (BMCC) of the Engineering and Environment Protection Section is responsible for engineering and construction activities including planning, designing and constructing buildings and physical infrastructure of the Mission. BMCC is headed by a staff at the P-4 level and has 222 authorized posts.
4. Between 2013/14 and 2014/15, UNAMID launched 42 engineering and construction projects including: 18 in Sector North; 9 in Sector South; 7 in Sector West; 5 in Sector East; and 3 in Sector Central. As at 30 November 2015, 31 projects had been completed and 11 were still ongoing. The 2013/14 and 2014/15 expenditures for the 42 projects were \$11.1 million and \$9.4 million respectively.
5. Comments provided by UNAMID are incorporated in italics.

II. OBJECTIVE AND SCOPE

6. The audit was conducted to assess the adequacy and effectiveness of UNAMID governance, risk management and control processes in providing reasonable assurance regarding the **effective management of engineering and construction activities in UNAMID**.
7. The audit was included in the 2015 risk-based work plan of OIOS because of the operational and financial risks relating to engineering and construction activities.
8. The key control tested for the audit was regulatory framework. For the purpose of this audit, OIOS defined this key control as the one that provides reasonable assurance that policies and procedures: (a) exist to guide the effective management of engineering and construction activities in UNAMID; (b) are implemented consistently; and (c) ensure the reliability and integrity of financial and operational information.
9. The key control was assessed for the control objectives shown in Table 1.
10. OIOS conducted this audit from August 2015 to February 2016. The audit covered the period from 1 July 2014 to 30 November 2015.
11. OIOS conducted an activity-level risk assessment to identify and assess specific risk exposures, and to confirm the relevance of the selected key control in mitigating associated risks. Through

interviews and analytical reviews, OIOS assessed the existence and adequacy of internal controls and conducted necessary tests to determine their effectiveness.

III. AUDIT RESULTS

12. The UNAMID governance, risk management and control processes examined were initially assessed as **partially satisfactory**¹ in providing reasonable assurance regarding the **effective management of engineering and construction activities in UNAMID**. OIOS made five recommendations to address the issues identified.

13. UNAMID had adequate standard operating procedures for engineering and related works, and project managers at the field site level were preparing weekly reports on activities being implemented including their progress and the challenges being faced. However, to improve operations, UNAMID needed to take action to strengthen its management and oversight of engineering activities to ensure: (a) the Project Management Group (PMG) was functioning effectively; (b) project managers complied with established guidelines for projects by preparing bills of quantities, cost estimates and performance targets for projects; (c) assigned staff were properly costing projects and subsequently analysing and monitoring actual costs and data to take corrective actions on their progress when required; and (d) project managers and assigned staff were complying with project closure procedures and maintaining complete project files.

14. The initial overall rating was based on the assessment of key control presented in Table 1. The final overall rating is **partially satisfactory** as implementation of three important recommendations remains in progress.

Table 1: Assessment of key control

Business objective	Key control	Control objectives			
		Efficient and effective operations	Accurate financial and operational reporting	Safeguarding of assets	Compliance with mandates, regulations and rules
Effective management of engineering and construction activities in UNAMID	Regulatory framework	Partially satisfactory	Partially satisfactory	Partially satisfactory	Partially satisfactory
FINAL OVERALL RATING: PARTIALLY SATISFACTORY					

Regulatory framework

The structures and procedures for managing engineering and construction projects were inadequate

15. The Departments of Peacekeeping Operations (DPKO) and Field Support (DFS) Guidelines on Governance of Major Construction Projects in Field Missions (the DPKO/DFS Guidelines on Major Construction Projects) require UNAMID to establish an appropriate project governance body for

¹ A rating of “**partially satisfactory**” means that important (but not critical or pervasive) deficiencies exist in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

engineering and construction activities, with clear terms of reference to: (a) oversee the planning and execution of major projects with an estimated cost of \$1 million or more; and (b) review and approve projects and related changes. The guidelines also require the Director of Mission Support to establish appropriate capacity including dedicated project managers with sufficient technical expertise, authority and resources for the day-to-day management of the construction projects.

16. Interviews with staff of BMCC and review of the terms of reference of the PMG indicated that in March 2012, UNAMID established the PMG with clear terms of reference to: (a) oversee the planning and execution of major projects; and (b) review and approve projects and related changes. The PMG was headed by the Chief, Service Delivery and comprised the heads of the Geospatial Information and Telecommunication Technology, Supply, Engineering, Water and Environment, and Safety and Security Sections, the Mission Support Centre and Military and Police components. The Director of Mission Support also assigned the UNAMID Chief Engineer, supported by sector-level engineers and individual project managers, for the day-to-day management of UNAMID construction and engineering activities. However, the PMG did not review and oversee the planning and execution of major construction projects such as the Level II Hospital in El Fasher with an estimated cost of \$5.5 million.

17. The above resulted because: (a) the Chief, Service Delivery convened only one PMG meeting on 30 June 2015 during the 17 months covered by the audit (1 July 2014 to 30 November 2015) and was of the view that issues relating to the engineering projects needed to be addressed by the UNAMID Senior Management Group; and (b) the Director of Mission Support had not completed amending the membership and terms of reference of the PMG as promised in their June 2015 meeting. A review of the records of meetings of the Senior Management Group indicated that the Group did not discuss matters related to engineering projects. As a result, there was a lack of adequate oversight over major projects, increasing the risk that projects were not properly planned and executed to meet the requirements of the Mission.

(1) UNAMID should expedite the restructuring of its Project Management Group (PMG) and take steps to ensure that the PMG is implementing its mandated functions.

UNAMID accepted recommendation 1 and stated that the Mission was in the process of developing new PMG terms of reference and nominating permanent and ad hoc members of the group. Recommendation 1 remains open pending receipt of evidence that UNAMID has restructured the PMG and taken steps to ensure that the PMG is implementing its mandated functions.

Non-adherence to prescribed planning procedures

18. The UNAMID standard operating procedures for engineering and related works require project managers to: prepare detailed drawings of construction work to be performed and bills of quantities for each project; establish performance targets with respect to timelines and costs for each project; and monitor actual material and labour usage against the bills of quantities for each project.

19. A review of the files for all 42 projects (39 in-house projects and 3 outsourced projects) implemented by UNAMID during the audit period indicated that project managers prepared detailed drawings of works to be performed. However, these managers did not: prepare bills of quantities and detailed cost estimates for 36 projects; and establish performance targets with respect to project timelines for 33 projects.

20. The above resulted because the Engineering Section had not implemented adequate supervisory and review procedures to ensure that project managers comply with established requirements for preparing bills of quantities, cost estimates and performance targets for implementing projects. As a

result, the estimated costs and timelines of projects were unknown, and UNAMID was precluded from identifying major projects that required senior management oversight. This posed a risk of cost overruns due to inadequate cost control measures and projects taking longer than necessary to complete.

(2) UNAMID should implement supervisory and review procedures regarding the planning of construction projects to ensure that project managers comply with established guidelines for preparing bills of quantities, cost estimates and performance targets for projects.

UNAMID accepted recommendation 2 and stated that the Chief Engineer would ensure that bills of quantities, cost estimates and performance targets for all ongoing projects were prepared by 30 June 2016. Recommendation 2 remains open pending OIOS verification that the Mission has prepared bills of quantities, cost estimates and performance targets for all ongoing projects.

Project costing and cost controls were not in place

21. UNAMID standard operating procedures require sector-level engineers and project managers to monitor projects: through frequent field visits, the actual material and labour usage for individual projects by comparing these to the bills of quantities for the projects; and assess and report on progress and quality. The procedures also require engineering staff and project managers at the sector levels to prepare and submit weekly reports to the Mission Chief Engineer highlighting progress, tests conducted, specific challenges, corrective actions taken and suggestions for improvement. The DPKO/DFS Guidelines on Major Construction Projects require the Engineering Section to ensure that all project costing data are recorded in an electronic project tracking system for monitoring and reporting project implementation.

22. A review of files for all 42 projects implemented during the audit period, interviews with staff of BMCC and review of UNAMID project management activities indicated that engineering staff and project managers at the sector level prepared and submitted the required weekly reports to the Chief Engineer highlighting: progress achieved; specific challenges being faced such as unavailability of materials due to bad road conditions and road access restrictions by the Government of Sudan; remedial actions taken by engineers such as adjustments to dimensions of helipads; and results of various tests conducted.

23. The Mission only started using Galileo to track project costs in June 2015. As at February 2016, UNAMID had updated Galileo with the actual costs of materials used and labour for 6 of 11 ongoing projects totaling \$813,646. However, UNAMID had not updated Galileo for the estimated project costs of these projects as well as the estimated and actual costs of materials used and labour for 5 of 11 ongoing projects.

24. The lack of project costing and monitoring resulted as the Engineering Section did not prepare bills of quantities and detailed cost estimates, as referred to above. Also, UNAMID management did not dedicate sufficient resources and implement adequate supervisory controls to ensure project managers recorded all project-related costs in the Galileo and regularly analysed the data to take prompt corrective actions. As a result, there was a risk of cost overruns.

(3) UNAMID should: (a) dedicate sufficient resources and implement effective supervisory controls to ensure that project managers record all project-related costs in Galileo in a timely manner; and (b) regularly analyse project data to take corrective actions over potential and actual budget overruns.

UNAMID accepted recommendation 3 and stated that it started creating Galileo records for almost all ongoing projects and would provide additional training to its staff on how to record project data

and extract project reports from Galileo. Recommendation 3 remains open pending receipt of evidence that UNAMID had completed updating Galileo with the relevant data for all ongoing projects and regularly analysed project data to take prompt corrective actions.

Project closure procedures were not adequate

25. The UNAMID standard operating procedures for engineering construction related works require project managers to review completed projects and prepare and submit all project completion reports to the Chief Engineer and self-accounting units. The procedures also require project managers to: submit outsourced project completion reports to the Contracts Management Section; and include in all project completion reports any lessons learned, certificates of completion signed by the respective project managers, representatives of the contractor, the end user section and the Contracts Management Section.

26. A review of files for all 31 completed projects (2 outsourced and 29 in-house) indicated that project managers complied with the closure process for 2 outsourced projects by preparing and submitting the related closure reports to the Chief Engineer, relevant self-accounting units and the Contracts Management Section. However, project managers had not properly implemented the required closure process for the in-house projects. This was because the Engineering Section had not implemented adequate supervisory controls to ensure the formal closure process was applied to completed projects. As a result, there was a risk that project managers did not properly follow the required closure process for the in-house projects and the Mission failed to take advantage of institutional learning.

(4) UNAMID should implement measures to ensure compliance with project closure procedures.

UNAMID accepted recommendation 4 and stated that it developed a project closure template for closing in-house projects and the Mission used the new template to formally close and hand over the Level II Hospital project in El Fasher to the UNAMID Medical Section on 2 May 2016. Based on the action taken by UNAMID, recommendation 4 has been closed.

Project files not well maintained

27. The DPKO/DFS Guidelines for Major Construction Projects and the UNAMID standard operating procedures for engineering and construction related works require project managers to maintain project files containing the Joint Special Representative’s approvals of projects, PMG meeting minutes and decisions made, project planning technical packages, environmental impact assessments, lessons learned and project completion reports.

28. A review of the files for 36 of 42 projects implemented by UNAMID during the audit period indicated that the files did not contain one or more of the following documents: project plans, Joint Special Representative’s approvals of projects, PMG minutes, lessons learned, project completion reports, and material requests. For instance, during our visit to the El Daein Hospital project, a review of the project files indicated that there were no material requests for windows, roofing sheets and doors although these items were installed. This was because Engineering Section management did not implement adequate supervisory controls to enforce the requirement for the maintenance of project files. As a result, there was a risk that the required procedures were not complied with.

(5) UNAMID should implement adequate supervisory control procedures to ensure that complete project files are maintained.

UNAMID accepted recommendation 5 and stated that the Engineering Section developed a standard project file checklist and distributed it to all Sector Engineers; and put in place procedures to ensure management review project files. Based on the action taken by UNAMID and review of relevant documents, recommendation 5 has been closed.

IV. ACKNOWLEDGEMENT

29. OIOS wishes to express its appreciation to the management and staff of UNAMID for the assistance and cooperation extended to the auditors during this assignment.

(Signed) Eleanor T. Burns
Director, Internal Audit Division
Office of Internal Oversight Services

STATUS OF AUDIT RECOMMENDATIONS

Audit of engineering and construction activities in the African Union-United Nations Hybrid Operation in Darfur

Recom. no.	Recommendation	Critical ¹ / Important ²	C/ O ³	Actions needed to close recommendation	Implementation date ⁴
1	UNAMID should expedite the restructuring of its Project Management Group (PMG) and take steps to ensure that the PMG is implementing its mandated functions.	Important	O	Receipt of evidence that UNAMID has restructured the PMG and taken steps to ensure that the PMG implement its mandated functions.	31 May 2016
2	UNAMID should implement supervisory and review procedures regarding the planning of construction projects to ensure that project managers comply with established guidelines for preparing bills of quantities, cost estimates and performance targets for projects.	Important	O	Receipt of evidence that UNAMID has prepared bills of quantities, cost estimates and performance targets for all ongoing projects.	30 June 2016
3	UNAMID should: (a) dedicate sufficient resources and implement effective supervisory controls to ensure that project managers record all project-related costs in Galileo in a timely manner; and (b) regularly analyse project data to take corrective actions over potential and actual budget overruns.	Important	O	Receipt of evidence that UNAMID has completed updating Galileo with the relevant data for all ongoing projects and regularly analysed project data to take prompt corrective actions.	31 December 2016
4	UNAMID should implement measures to ensure compliance with project closure procedures.	Important	C	Action taken	Implemented
5	UNAMID should implement adequate supervisory control procedures to ensure that complete project files are maintained.	Important	C	Action taken	Implemented

¹ Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

² Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

³ C = closed, O = open

⁴ Date provided by UNAMID in response to recommendations.

APPENDIX I

Management Response

AFRICAN UNION

الاتحاد الأفريقي



UNAMID



UNITED NATIONS

الأمم المتحدة

African Union – United Nations Hybrid Operation in Darfur

Office of the Joint Special Representative

04 May 2016

To: Mr. Bolton Tarleh Nyema, Chief
Peacekeeping Audit Service
Internal Audit Division, OIOS

From: Martin Ihoeghian Uhomoibhi
Joint Special Representative and Joint Chief Mediator
UNAMID

Subject: **Draft report on an audit of engineering and construction activities in the African Union-United Nations Hybrid Operation in Darfur (Assignment No. AP2015/634/06)**

1. With reference to your memorandum of 21 April 2016, on the captioned-subject matter, please find attached UNAMID's response (Appendix I) to the draft report for your consideration.
2. All related portfolio of evidence have been submitted to the office of the Chief Resident Auditor for verification.
3. I further confirm on the factual accuracy of the report.

Thank you.

cc: Mr. Wolfgang Weiszegger, Director a.i., Mission Support Division, UNAMID
Mr. Yonas Araia, Acting Chief Engineer, UNAMID
Mr. Ebrima Ceesay, Chief, Service Deliver Sections, UNAMID
Ms. Eleanor T. Burns, Director, Internal Audit Division, OIOS
Mr. Velayutham Gopal, Audit Focal Point, UNAMID
Mr. Edward Zormelo, OIC, UNAMID Resident Audit Office, Internal Audit Division, OIOS
Ms. Cynthia Avena-Castillo, Professional Practices Section, Internal Audit Division, OIOS

Management Response

Audit of Engineering and construction activities in the African Union-United Nations Hybrid Operation in Darfur

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	UNAMID should expedite the restructuring of its Project Management Group (PMG) and take steps to ensure that the PMG implement its mandated functions.	Important	Yes	Chief Service Delivery Section	31 May 2016	Project Management Group (PMG) terms of reference is being finalized. PMG permanent members and ad hoc members will be nominated. The first kick off meeting is expected to start mid May 2016. Evidence of portfolio will be accorded to OIOS for records.
2	UNAMID should implement adequate and effective supervisory and review procedures regarding the planning of construction projects to ensure that project managers comply with established guidelines for preparing bills of quantities, cost estimates, and performance targets for projects.	Important	Yes	Chief Engineer	30 June 2016	UNAMID will endeavor to complete the exercise of preparing bills of quantities, cost estimates, and performance targets for all ongoing projects, for the remaining four sectors by 30 June 2016.
3	UNAMID should: (a) determine the estimated and actual costs of all ongoing projects and record these in Galileo; and (b) implement effective supervisory controls to ensure that project managers promptly record all project-related costs in the Galileo and regularly analyze project data to take prompt corrective actions.	Important	Yes	Chief Engineer	31 December 2016	As evident from the OIOS observation, Engineering Section has already commenced action by creating Galileo records for almost all on-going projects. However, the additional training will be given to the staff, and production of project reports, from Galileo will be initiated.

¹ Critical recommendations address critical and/or pervasive deficiencies in governance, risk management or control processes, such that reasonable assurance cannot be provided with regard to the achievement of control and/or business objectives under review.

² Important recommendations address important (but not critical or pervasive) deficiencies in governance, risk management or control processes, such that reasonable assurance may be at risk regarding the achievement of control and/or business objectives under review.

Management Response

Audit of Engineering and construction activities in the African Union-United Nations Hybrid Operation in Darfur

Rec. no.	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
4	UNAMID should implement measures to ensure compliance with project closure procedures.	Important	Yes	Chief Engineer	02 May 2016	Engineering Section has developed a project closure template for in-house projects and the Mission used the new template to formally close and handover the Level II Hospital project in El Fasher, to UNAMID Medical Section on 02 May 2016.
5	UNAMID should implement adequate and effective supervisory control procedures to ensure that complete project files are maintained.	Important	Yes	Chief Engineer	02 May 2016	As highlighted during the detailed audit results phase, Engineering Section has initiated procedures to ensure that Management review the completeness of all project files. Further to that, management has created a project file check list which has been circulated to all sector engineers. In the light of the steps taken the Mission seeks closure of this recommendation.