



INTERNAL AUDIT DIVISION

REPORT 2016/159

Audit of the repairs and maintenance of generators in the United Nations Support Office in Somalia

There was a need to ensure that the African Union Mission in Somalia and contractor comply with established generator maintenance regime

14 December 2016

Assignment No. AP2016/638/04

Audit of the repairs and maintenance of generators in the United Nations Support Office in Somalia

EXECUTIVE SUMMARY

The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes over the repairs and maintenance of generators in the United Nations Support Office in Somalia (UNSOS). The audit covered the period from 1 July 2013 to 30 June 2016 and included a review of generator maintenance activities of the contractor, checks and monitoring by the African Union Mission in Somalia (AMISOM) of generators performance, and management of contractor's performance.

UNSOS was identifying its repair and maintenance requirements and issuing signed task orders and related supplies to AMISOM generator maintenance staff and the contractor. It had also put in place adequate controls over the processing and payment of contractor's invoices. However, there was a need to ensure that AMISOM and the contractor comply with the established maintenance regime.

OIOS made two important recommendations. To address issues identified in the audit, UNSOS needed to implement:

- Ensure the contractor provides adequate training to AMISOM generator maintenance staff on the performance of required checks and that they are performed consistently and that the established maintenance regime is complied with;
- Ensure the contractor's compliance with the established maintenance regime.

UNSOS accepted the recommendations and has initiated appropriate action to implement them.

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I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the repairs and maintenance of generators in the United Nations Support Office in Somalia (UNSOS).
2. The Facilities and Environmental Management Section (FEMS) was responsible for repair and maintenance of equipment, including generators. FEMS was headed by an officer-in-charge at the Field-Service-7 level, and supported by 21 personnel from service providers, 11 international staff, 3 United Nations volunteers and 1 national staff. Generator maintenance is defined as a combination of all technical and associated administrative actions intended to retain a generator in or to restore it to a state of effective and efficient performance.
3. UNSOS established a contract with a not-to-exceed amount of \$9.1 million for the maintenance of equipment including generators. As at 30 June 2016, UNSOS had 552 generators with a purchase cost of \$19.6 million and depreciated value of \$10.8 million. UNSOS also used the African Union Mission in Somalia (AMISOM) field staff for the repair and maintenance of generators at locations not accessible to the contractor due to security concerns. As at 30 June 2016, UNSOS had issued 1,280 work orders with supplies costing \$0.5 million to AMISOM to maintain generators not accessible to the contractor.
4. Comments provided by UNSOS are incorporated in italics.

II. AUDIT OBJECTIVE, SCOPE AND METHODOLOGY

5. The objective of the audit was to assess the adequacy and effectiveness of governance, risk management and control processes over the repairs and maintenance of generators in UNSOS.
6. This audit was included in the 2016 risk-based work plan of OIOS because of operational and financial risks related to the ineffective repairs and maintenance of generators in Somalia.
7. OIOS conducted this audit from July to September 2016. The audit covered the period from 1 July 2013 to 30 June 2016. Based on an activity-level risk assessment, the audit covered higher and medium risks areas in the repairs and maintenance of generators and included a review of generator maintenance activities of the contractor, checks and monitoring by AMISOM of generators performance and management of contractor's performance.
8. The audit methodology included: (a) interviews of key personnel; (b) review of relevant documentation; (c) analytical reviews of data; and (d) judgemental sample testing of transactions.

III. OVERALL CONCLUSION

9. UNSOS identified its maintenance requirements and issued duly signed task orders and related supplies to AMISOM and the contractor. It also put in place adequate controls over the processing and payment of the contractor's invoices. However, UNSOS needed to ensure that AMISOM and the contractor comply with the established maintenance regime by providing additional training to AMISOM and implementing monitoring procedures.

IV. AUDIT RESULTS

A. Generator maintenance activities

AMISOM was not complying with the established generator maintenance regime

10. UNSOS requires AMISOM staff to perform generator-related Level 1 maintenance and daily checks, record generator odometer readings, and collect generators' performance and maintenance data. The contract for the repair and maintenance of equipment (the service contract) requires UNSOS to ensure that the contractor provide basic training to AMISOM field staff on generator maintenance, routine checks, performance monitoring and related record keeping and reporting. UNSOS had a practice of issuing supplies to AMISOM field staff to service and maintain generators through signed tasks orders.

11. A review of the service contract, training records of AMISOM field staff and interview with the staff of UNSOS and the contractor indicated that: (a) the contractor conducted eight sessions for AMISOM field staff on the required basic training during the audit period; and (b) UNSOS properly identified its repair and maintenance requirements and issued signed task orders and related supplies to AMISOM field staff. However, AMISOM field staff did not collect and maintain any records of their routine daily checks, odometer readings, and monitoring of generators' performance. This occurred because UNSOS did not implement measures to ensure the contractor provided an effective training programme to AMISOM field staff. Therefore, the contractor only provided basic training in response to requests from AMISOM. UNSOS had also not implemented procedures to confirm whether AMISOM was adequately conducting routine checks and regular maintenance, and monitoring the performance of generators.

12. As a result, there was limited data on generator maintenance and their performance resulting in reduced capacity for UNSOS to timely detect and take corrective actions to address generator performance issues.

(1) UNSOS should implement supervisory and monitoring procedures to ensure the contractor provides adequate training to AMISOM generator maintenance staff on the performance of required checks and that they are performed consistently and that the established maintenance regime is complied with.

UNSOS accepted recommendation 1 and stated that it would expand training syllabus for AMISOM generator maintenance staff to include daily recording of routine inspection, servicing of generators, etc. Recommendation 1 remains open pending receipt of evidence that UNSOS has: (a) delivered an expanded training syllabus to AMISOM generator maintenance staff; and (b) ensured the collection and maintenance of records of routine daily checks, odometer readings and monitoring of generators' performance.

Need to enforce compliance by the service contractor with established generator maintenance regime

13. The Department of Peacekeeping Operations/Department of Field Support (DPKO/DFS) Guidelines on Generator Maintenance requires UNSOS to carry out: (a) maintenance work on each generator after 250 hours of operation; and (b) daily checks on each generator in use and quarterly checks on each generator in stock to identify and timely correct defects. UNSOS had outsourced these services and was required to ensure that the service contractor performed the relevant services. UNSOS standard operating procedures (SOPs) for the service contract require UNSOS to issue signed task orders with

timetables to the contractor for services to be performed and monitor the contractor's provision of required services.

14. A review of records of generator daily checks maintained by the contractor and analysis of all maintenance summaries for 2,792 tasks orders related to 480 generators in use and in stock indicated that UNSOS: (a) properly identified its repair and maintenance requirements and issued signed task orders to the contractor; and (b) was monitoring contractor's implementation of the relevant tasks through monthly reporting. However, the contractor did not: (i) service 23 of the sampled 350 generators after operating each of them for an average of 1,190 hours; (ii) service another 132 of the sampled 350 generators after 250 hours of operations as these were serviced after they were operated 375 hours each on average; and (iii) perform quarterly checks for generators in stock.

15. UNSOS advised that the reported operating hours were inaccurate as it did not take into consideration maintenance activities conducted by AMISOM field staff. However, there was no evidence that UNSOS took appropriate actions to enforce the accurate record keeping and established maintenance regime. Although UNSOS had assigned three staff to work closely with the contractor, the Chief Engineer, as the responsible officer, did not adequately supervise these staff as they did not report on their activities.

16. As a result, there was a risk: that generators may not be available when needed; and of financial loss related to increased cost of repairs. For example, 87 of the generators in use were faulty and pending repairs with the contractor, and repairs and maintenance costs of 63 generators over a 24-month period averaged \$7,741.

(2) UNSOS should implement effective supervisory and monitoring procedures to ensure the contractor's compliance with established maintenance regime.

UNSOS accepted recommendation 2 and stated that it would implement enhanced oversight and quality controls to ensure that the contractor complies with the relevant maintenance requirements. Recommendation 2 remains open pending receipt of evidence that UNSOS has implemented adequate oversight and quality control measures to ensure the contractor's compliance with established generator repair and maintenance regime.

B. Contractor performance management

There were adequate controls over the processing and payment of invoices

17. The service contract requires the contractor to invoice UNSOS for maintenance services provided in Mogadishu at an hourly rate of \$61 and for locations outside of Mogadishu at \$66. The SOPs on the implementation of the service contract require UNSOS to verify and certify receipt of services described in invoices and pay the contractor using rates in the contracts.

18. A review of all 34 invoices totaling \$1.2 million and interviews with the UNSOS generator maintenance staff indicated that authorized UNSOS staff had verified and certified receipt of services described in the invoices and paid the contractor using rates in the contracts.

19. OIOS concluded that UNSOS had put in place adequate controls over the processing and payment of the contractor's invoices.

Contract performance reviews needed to improve

20. The DPKO/DFS Guidelines on Generator Maintenance and service contract require UNSOS to monitor and evaluate the contractor's performance against established maintenance schedule and key performance indicators (KPIs). The SOPs for implementing the service contract require UNSOS Contract Management Section to oversee and evaluate the performance of the contractor through monthly performance meetings.

21. A review of the minutes of the monthly performance review meetings, performance evaluations reports, monthly KPI reports, and interviews with UNSOS management indicated that UNSOS had: (a) conducted all required monthly performance meetings; and (b) reviewed, monitored and evaluated the contractor's performance against all established KPIs and was satisfied with the performance of the contractor. However, OIOS review noted that the contractor was not servicing generators in a timely manner, and therefore its performance could be improved. OIOS did not make a separate recommendation relating to performance monitoring since the two recommendations made in the report are expected to result in timely servicing of generators.

V. ACKNOWLEDGEMENT

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

(Signed) Eleanor T. Burns
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Office of Internal Oversight Services

STATUS OF AUDIT RECOMMENDATIONS

Audit of the repairs and maintenance of generators in the United Nations Support Office in Somalia

Rec. no.	Recommendation	Critical ¹ / Important ²	C/ O ³	Actions needed to close recommendation	Implementation date ⁴
1	UNSOS should implement supervisory and monitoring procedures to ensure the contractor provides adequate training to AMISOM generator maintenance staff on the performance of required checks and that they are performed consistently and that the established maintenance regime is complied with.	Important	O	Receipt of evidence that UNSOS has: (a) delivered expanded training syllabus to AMISOM generator maintenance staff; and (b) ensured the collection and maintenance of records of routine daily checks, odometer readings, and monitoring of generators' performance.	31 March 2017
2	UNSOS should implement effective supervisory and monitoring procedures to ensure the contractor's compliance with established maintenance regime.	Important	O	Receipt of evidence that UNSOS has implemented adequate oversight and quality control measures to ensure the contractor's compliance with established generator repair and maintenance regime.	31 March 2017

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 UNSOS in response to recommendations.

APPENDIX I

Management Response

Management Response

Audit of the repairs and maintenance of generators in United Nations Support Office in Somalia

	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual	Implementation date	Client comments
1	UNSOS should implement an effective training programme, supervisory and monitoring procedures to ensure the collection and maintenance of the records of routine daily checks, odometer readings, and monitoring of generators' performance and compliance with established maintenance regime by AMISOM generator maintenance staff.	Important	Yes	Chief Training Section	31 March 2017	The UNSOS training programme for AMISOM generator maintenance was implemented three years ago based on course timings identified by AMISOM. Eight courses have been completed successfully. The syllabus will be expanded to include daily recording of routine inspections and servicing, fuel filter cleaning and fuel quality check; fuel quantity in generator tank, generator machine hours, generator output and any issues. The content of the syllabus will be developed by UNSOS in collaboration with the contractor.
2	UNSOS should take adequate and effective supervisory and monitoring procedures to ensure the contractor's compliance with established maintenance regime.	Important	Yes	Officer-in-Charge, Vehicle, Plant and Equipment Maintenance Section	31 March 2017	UNSOS will strengthen existing contractor monitoring and reporting arrangements. Supervision and monitoring of the contractor for generator maintenance will be in the broader context of

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Management Response

Audit of the repairs and maintenance of generators in United Nations Support Office in Somalia

	Recommendation	Critical ¹ / Important ²	Accepted? (Yes/No)	Title of responsible individual (VPEMS)	Implementation date	Client comments
						managing contractor performance in compliance with the terms and conditions of the contract.