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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, UNMIS

DATE: 23 December 2009

REFERENCE: IAD: 09- 03257

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



SUBJECT: **Assignment No. AP2009/632/12 – Audit of security and reliability of communication installations in UNMIS**
OBJET: UNMIS

Controls to safeguard major communications installations were generally in place, but technicians involved in rigging work need to be trained and certified to enhance occupational safety

1. I am pleased to present the report on the above-mentioned audit which was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

2. Based on your comments, we are pleased to inform you that we will close recommendations 2 and 3 in the OIOS recommendations database as indicated in Annex 1. 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 4), in its annual report to the General Assembly and semi-annual report to the Secretary-General.

EXECUTIVE SUMMARY

Audit of security and reliability of communications installations in UNMIS

OIOS conducted an audit of security and reliability of communications installations in the United Nations Mission in Sudan (UNMIS). The overall objective of the audit was to assess the adequacy and effectiveness of physical security over communication installations in the Mission. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

The Communications and Information Technology Section (CITS) in UNMIS has established controls to safeguard major communications installations and ensure their reliability. However, improvements were needed as follows:

- The CITS Rigging Unit had six staff and 28 technicians of which only two were certified as riggers. The Mission's failure to sufficiently train staff and technicians may result in substandard maintenance work and an avoidable safety risk.
- Very small aperture satellite VSATs terminals located within the Mission's compounds in Juba, El Obeid and Kadugli did not have perimeter demarcations to prevent vehicles and unauthorized personnel from accessing them.
- Maintenance works done in Juba and El Obeid were not properly documented and therefore could not be verified.

OIOS made five recommendations to address the issues identified during the audit to further strengthen internal controls and improve communication services in UNMIS.

I. INTRODUCTION

1. The Office of Internal Oversight Services (OIOS) conducted an audit of security and reliability of communications installations in the United Nations Mission in Sudan (UNMIS).
2. The Communications and Information Technology Section (CITS) is responsible for the overall administration of communications support services to the Mission. The value of the Mission's communications assets was \$18 million representing 32 per cent of the value of CITS assets of \$56 million.
3. Comments made by UNMIS are shown in *italics*.

II. AUDIT OBJECTIVES

4. The objectives of the audit were to assess the adequacy and effectiveness of physical security over communication installations and reliability of the installations in the Mission.

III. AUDIT SCOPE AND METHODOLOGY

5. The audit covered the fiscal year 2008-2009, as well as current practices and procedures. All major communications installations were reviewed including satellite dishes and transmitters, masts installed with antennas and microwave transmitters, VSATs, servers, repeaters and routers.
6. The audit methodology comprised reviewing of pertinent documents and records, interviewing key personnel, and physical inspections of communications installations in Khartoum, Juba, El Obeid and Kadugli, which were done in coordination with CITS.

IV. AUDIT FINDINGS AND RECOMMENDATIONS

A. Physical security of communications installations

Very Small Aperture Terminals (VSAT)

7. The Mission has installed major communications infrastructures to ensure that reliable telecommunication services via satellite, radio, microwave and wire/cable technologies are available. Installations include satellite dishes and transmitters, masts installed with antennas and microwave transmitters, VSATs, servers, repeaters and routers.
8. Of the 55 VSATs distributed throughout the Mission's area of operations, only the VSAT at UNMIS Headquarters Compound in Khartoum was properly safeguarded. The VSATs in El Obeid, Juba and Kadugli were not completely fenced in and their perimeter boundaries were not properly demarcated to protect against unauthorized access. For example, while the satellite farm in Kadugli is located in the UNMIS compound, it is situated next to the road where there is heavy vehicular traffic and therefore at risk of being damaged in the event of an accident on the road.

9. VSATs produce radiation, therefore, in OIOS' opinion there is a need for proper demarcation to prevent vehicles and unauthorized personnel coming too close to them.

Recommendation 1

(1) The UNMIS Office of Mission Support should ensure that the perimeter boundary surrounding all Very Small Aperture Satellite Terminals are marked and fenced to protect them from unauthorized access.

10. *The UNMIS Management accepted recommendation 1 and stated that a work programme has been initiated to secure the perimeters around all VSAT terminals. Recommendation 1 remains open pending confirmation that perimeter fencing has been provide around all VSAT terminals.*

Unauthorized access to wireless network

11. CITS provides internet and voice services to sectors and team sites using wireless network where the use of cable is not feasible. In July 2009, the CITS in Khartoum detected 27 violations by the Egyptian contingent by gaining unauthorized access to the Mission's wireless network. The violations had not been officially communicated to the Force Commander for redress. The Officer-in-Charge (OIC) of CITS informed OIOS that they were in the process of upgrading the authentication control protocol to prevent unauthorized access to the network.

Recommendation 2

(2) The UNMIS Management should ensure that contingents are disciplined for unauthorized connections to the Mission's wireless network.

12. *The UNMIS Management accepted recommendation 2 and stated that action is already being taken by the Military Chief of Staff. Based on the Mission's response, recommendation 2 has been closed.*

B. Maintenance of communication installations

General maintenance

13. The work plan of the CITS provides that daily and monthly service checks are to be conducted to ensure the reliability of communications installations in the Mission. Satellite links at the main hub in Khartoum are monitored by five satellite technicians on a daily basis to ensure optimum service levels. The telephone exchanges and servers are monitored by 47 technicians. Wide area, voice and data services are routed via 72 telephone exchanges and 28 microwave links co-located at VSAT locations. These installations are critical to communications and must be adequately maintained.

14. The maintenance works done in Juba and El Obeid were not well documented. Therefore, OIOS could not assess the works to determine whether they had been performed in compliance with the relevant standards. For example, the maintenance standard for

masts requires that masts be maintained every 8-12 months. As there was no record of maintenance activities conducted by the Rigging Unit, OIOS was unable to determine whether this standard was complied with for each location.

Recommendation 3

(3) The UNMIS Office of Mission Support should ensure that logbooks are maintained in each Sector Headquarters to record all maintenance activities.

15. *The UNMIS Management accepted recommendation 3 and stated that logbooks had been established.* Based on the action taken by UNMIS, recommendation 3 has been closed.

Technicians were not adequately trained

16. It is mandatory that technicians who maintain telecommunications masts are trained and certified as riggers. The CITS Rigging Unit has six staff of which only two are certified as riggers. The Rigging Unit is further supported by 28 technicians in the field who had limited aerial experience relating to the maintenance of masts in addition to not having any form of certification.

17. The failure of the Mission to sufficiently train and certify technicians may result in substandard maintenance works on masts and exposes the technicians to high degree of safety and occupational risk as well as reputation risk to the Mission for violation of safety standards.

Recommendation 4

(4) The UNMIS Office of Mission Support should ensure that technicians involved in the maintenance of riggs are duly trained and certified in compliance with the relevant standards.

18. *The UNMIS Management accepted recommendation 4 and stated that staff members involved in rigging activities have completed the re-certification training programme during November 2009.* Based on the action taken by UNMIS, recommendation 4 has been closed.

Damage to masts' support structures

19. According to CITS, there has been considerable damage to a number of mast support structures due to careless driving mainly at team sites in Kadugli, Malakal, Abyei and Awil. According to the Rigging Unit, any mast that is more than 100 feet high requires a ground space of about 200 feet in diameter to position its support cable wires and chains, which occupy a sizeable portion of the camp. The lack of adequate perimeter space exposes the masts to the risk of damage resulting from vehicular accidents.

Recommendation 5

(5) The UNMIS Office of Mission Support should ensure that support structures in respect of masts that are located within camps or along driveways are adequately protected to mitigate the risk of damage from vehicular accidents.

20. *The UNMIS Management accepted recommendation 5 and stated that a work programme will be implemented in close coordination with the Engineering Section to secure support structures of masts. Recommendation 5 remains open pending the erection of support structures for all masts.*

V. ACKNOWLEDGEMENT

21. 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.

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. Denfern Simpson, OIC, Communication and Information Tech. Section, UNMIS
Mr. Swatantra Goolsarran, Executive Secretary, UN Board of Auditors
Ms. Susanne Frueh, Executive Secretary, Joint Inspection Unit
Mr. Seth Adza, Chief, Audit Response Team, Department of Field Support
Mr. Moses Bamuwamye, Chief, Oversight Support Unit, Department of Management
Mr. Byung-Kun Min, Special Assistant to the USG, OIOS
Ms. Eleanor T. Burns, Chief, Peacekeeping, Audit Service, OIOS

CONTACT INFORMATION:

ACTING DIRECTOR:

Fatoumata Ndiaye: Tel: +1.212.963.5648, Fax: +1.212.963.3388,
e-mail: ndiaye@un.org

ACTING DEPUTY DIRECTOR:

Gurpur Kumar: Tel: +1.212.963.5920, Fax: +1.212.963.3388,
e-mail: kumarg@un.org

CHIEF, PEACEKEEPING AUDIT SERVICE:

Eleanor T. Burns: Tel: +1.917.367.2792, Fax: +1.212.963.3388,
e-mail: burnse@un.org

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 ensure that the perimeter boundary surrounding all very small aperture satellite terminals are marked and fenced to protect them from unauthorized access.	Operational	Medium	O	Pending the provision of perimeter fencing around all VSAT terminals.	Not provided
2	The UNMIS Management should ensure that contingents are disciplined for unauthorized connections to the Mission's wireless network.	Operational	Medium	C	Action taken.	Implemented
3	The UNMIS Office of Mission Support should ensure that logbooks are maintained in each Sector Headquarters to record all maintenance activities.	Operational	Medium		Action taken.	Implemented
4	The UNMIS Office of Mission Support should ensure that technicians involved in the maintenance of rigs are duly trained and certified in compliance with relevant standards.	Human resource	High	C	Action taken.	Implemented
5	The UNMIS Office of Mission Support should ensure that support structures in respect of masts that are located within camps or along driveways are adequately protected to mitigate the risk of damage from vehicular accidents.	Operational	Medium	O	A work programme to be implemented in close coordination with the Engineering Section to secure the support structures of all masts.	Not provided

1. C = closed, O = open

2. Date provided by UNMIS in response to recommendations.