



INTERNAL AUDIT DIVISION

AUDIT REPORT

Audit of management of engineering projects in UNAMI

Overall results relating to effective management of engineering projects were initially assessed as unsatisfactory. Implementation of four critical recommendations and one important recommendation remains in progress.

FINAL OVERALL RATING: UNSATISFACTORY

29 November 2012

Assignment No. AP2011/812/07

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AUDIT REPORT

Audit of management of engineering projects in UNAMI

I. BACKGROUND

1. The Office of Internal Oversight Services (OIOS) conducted an audit of the management of engineering projects in the United Nations Mission for Iraq (UNAMI).
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 UNAMI Engineering and Building Management Section (EBMS) was responsible for planning, designing, constructing, refurbishing, and maintaining UNAMI premises and utility plants in Iraq, Jordan and Kuwait. Due to the gradual withdrawal of United States Forces in Iraq (USF-I) during 2009 through 2011, UNAMI had to establish office and residential accommodations and other logistic and security infrastructure for its operations in Iraq. As a result, the role of the EBMS became critical in supporting the Mission's operations in Iraq.
4. EBMS, with Headquarters in Baghdad, was headed by an Officer-in-Charge (OIC) at P-4 level. The OIC reported to the Chief Mission Support (CMS) through the Office of the Chief of Technical Services (CTS). There were six regional offices to support the Mission's operations in Amman, Kuwait, Baghdad International Airport (BIAP), Erbil, Kirkuk and Basra, each headed by a regional engineer. EBMS had 64 authorized posts of which 53 were encumbered comprising of 44 national and 9 international staff. The posts of Chief Engineer, one P-3 and nine national staff were vacant as of 1 July 2012.
5. The budget and expenditure for 2009, 2010 and 2011 are shown in Table 1. The budget for 2011 increased compared to the previous years' due to the need to establish alternate accommodations and other logistic and security facilities following the withdrawal of USF-I.

Table 1: Budget and actual expenditure of the EBM Section

| Fiscal year | Budget | Actual Expenditure | Unused Funds |
|--------------|-------------------|--------------------|------------------|
| | (\$) | (\$) | (\$) |
| 2009 | 8,907,800 | 7,413,700 | 1,494,100 |
| 2010 | 9,366,600 | 6,639,700 | 2,726,900 |
| 2011 | 16,323,300 | 13,994,900 | 2,328,400 |
| Total | 34,597,700 | 28,048,300 | 6,549,400 |

6. Comments provided by UNAMI are incorporated in *italics*.

II. OBJECTIVE AND SCOPE

7. The audit was conducted to assess the adequacy and effectiveness of the UNAMI governance, risk management and control processes in providing reasonable assurance regarding the **effective management of engineering projects**.

8. The audit was included in the 2011 OIOS risk-based work plan as the implementation of engineering projects was critical to the safety and security of staff and was needed for the successful accomplishment of the Mission's mandate.

9. The key controls tested for the audit were: (a) regulatory framework; and (b) project management. For the purpose of this audit, OIOS defined these key controls as follows:

(a) **Regulatory framework** - controls that provide reasonable assurance that policies and procedures (i) exist to guide the management of engineering projects; (ii) are implemented consistently; and (iii) ensure financial and operational information is reliable and produced with integrity.

(b) **Project management** - controls that provide reasonable assurance that there is sufficient project management capacity (e.g. sufficient financial and human resources and tools) to implement engineering projects.

10. The key controls were assessed for the control objectives shown in Table 2.

11. OIOS conducted this audit from October 2011 to April 2012. The audit covered the period from 1 January 2009 to 31 December 2011.

12. OIOS conducted an activity-level risk assessment to identify and assess specific risk exposures, and to confirm the relevance of the selected key controls in mitigating associated risks. Through interviews, analytical reviews and tests of controls, OIOS assessed the existence and adequacy of internal controls and conducted necessary tests to determine their effectiveness.

III. AUDIT RESULTS

13. The UNAMI governance, risk management and control processes examined were assessed as **unsatisfactory** in providing reasonable assurance regarding the **effective management of engineering projects**. OIOS made seven recommendations to address issues identified. Controls over engineering projects were significantly weak including the lack of segregation of incompatible functions. UNAMI lacked adequate capacity including appropriate structures and procedures for the management of engineering projects. There was no Project Committee similar to those in other missions; and the position of Chief of EBMS had been vacant for more than three years, with the Section managed by a staff member who did not have the relevant experience and skills. Consequently, project-specific planning was inadequate and there remained an unmitigated risk of projects not meeting the requirements of the Mission.

14. The initial overall rating was based on the assessment of key controls presented in Table 2 below. The final overall rating is **unsatisfactory** as implementation of four critical recommendations and one important recommendation remains in progress.

Table 2: Assessment of key controls

| Business objective | Key controls | Control objectives | | | |
|---|--------------------------|------------------------------------|--|------------------------|---|
| | | Efficient and effective operations | Accurate financial and operational reporting | Safeguarding of assets | Compliance with mandates, regulations and rules |
| Effective management of engineering projects | (a) Regulatory framework | Unsatisfactory | Partially satisfactory | Unsatisfactory | Unsatisfactory |
| | (b) Project management | Unsatisfactory | Partially satisfactory | Unsatisfactory | Unsatisfactory |
| FINAL OVERALL RATING: UNSATISFACTORY | | | | | |

A. Regulatory framework

Deficiencies in engineering management resulted in overpayments

15. Primarily due to the lack of due diligence on the part of the OIC of EBMS who was also the certifying officer for the Section, OIOS calculated that UNAMI overpaid \$632,992 to two contractors (Contractor A and B) for the construction of overhead and sidewall protection at a supplemental staff accommodation in Baghdad (\$523,873) and for the refurbishment and security measures implemented at the Kirkuk Regional Air Base (\$109,119), as detailed below.

(a) Overhead and sidewall protections at a supplemental staff accommodation in Baghdad

16. UNAMI awarded a contract for a Not-to Exceed (NTE) amount of \$1,833,005 to Contractor A. After the award, EBMS changed the design, which significantly reduced the scope of work. However, no change order was issued.

17. The OIC of EBMS issued completion certificates without carrying out a credible inspection and evaluation of Contractor A’s work. The certificate was used by the Finance Section to pay \$1,649,704 to the Contractor, representing 90 per cent of the invoiced amount of \$1,833,005. Had the OIC inspected, evaluated and hence certified the actual work done, which was belatedly determined by EBMS, the Contractor would have been paid \$1,125,832 representing 90 per cent of \$1,250,925, the value of actual work done, or \$523,873 less than the amount paid. The OIC of EBMS should have relied on the technical evaluation of a project manager when certifying the work of contractors. However, the OIC assumed these responsibilities for the project, but failed to carry out the project management functions of inspecting and evaluating the work of Contractor A.

(b) Refurbishment and security-mitigating measures at the Kirkuk Regional Air Base

18. UNAMI awarded a contract with a NTE amount of \$249,745 to Contractor B. However, due to changes in the requirements, the NTE amount of \$249,745 was increased to \$645,235 reflecting the cost of the additional work. However, savings relating to work not carried out under the initial contract, were not deducted or reflected in the revised contract.

19. The assigned project manager and Contractor B determined the actual billable cost for this project was \$121,248 less than Contractor’s B invoice. Nonetheless, the OIC of EBMS issued the completion

certificates, which were used by the Finance Section to pay \$580,712, representing 90 per cent of the invoiced amount of \$645,235. Had the OIC certified the actual work done, Contractor B would have been paid \$471,593 representing 90 per cent of \$523,992, the value of actual work done, or \$109,119 less than the amount actually paid.

- (1) UNAMI should initiate the process for recovering the overpayment of \$632,992 from two contractors.**
- (2) UNAMI should, in consultation with the Department of Field Support, carry out an administrative review of all contracts managed by the Engineering and Building Management Section with the aim to identify other overpayments, and initiate action, where appropriate.**
- (3) UNAMI should, with immediate effect and in consultation with the United Nations Controller, suspend or withdraw the certifying authority of the Officer-in-Charge of the Engineering and Building Management Section (EBMS) and designate a new certifying officer, preferably the Chief, Technical Services, for the EBMS.**
- (4) UNAMI should take appropriate action against Contractor A and Contractor B for claiming payments for work not performed including documenting it as part of the performance evaluation and informing the Vendor Review Committee accordingly.**

UNAMI accepted recommendation 1 and stated that they have put the two contractors on notice, and secured a credit note for \$523,919 from Contractor A. However, a preliminary internal assessment indicated that the overpayment was in the order of \$269,172. An independent assessment of as-built quantities was being carried out by an expert from DFS to establish the exact amount of overpayment. Recommendation 1 remains open pending OIOS verification of the work done by DFS in determining the amount payable to contractors A and B, and evidence of recovery of overpayments made.

UNAMI accepted recommendation 2 and stated that DFS had started work in late October 2012 to review contracts and determine overpayments, if any. Recommendation 2 remains open pending receipt of evidence of the results of DFS review and the subsequent action taken.

UNAMI accepted recommendation 3 and stated that the certifying authority of the Officer-in-Charge of the Engineering and Building Management Section had been suspended and the Chief Technical Services was the new certifying officer. Based on the action taken, recommendation 3 has been closed.

UNAMI accepted recommendation 4 and stated that the cases of these claims for payment of work not performed would be reviewed by an external consultant or the current expert from DFS. Once the results are available, further actions including referring the cases to the Vendor Review Committee would be taken within 30 days. Recommendation 4 remains open pending receipt of evidence that UNAMI has completed its review of the claims for payment of work not performed by contractors A and B, with appropriate action taken.

UNAMI was not consistently obtaining the required performance bonds from vendors

20. All 30 engineering project contracts reviewed required contractors to submit performance bonds equivalent to 10 per cent of the respective value of the contract. UNAMI did not obtain the required

performance bonds for eight contracts with a total NTE amount of \$2,959,960. The eight contracts included three awarded to Contractor A and four awarded to Contractor B.

(5) UNAMI should review of all contracts to ensure that performance bonds are obtained from contractors in accordance with the terms and conditions of the contracts, and establish a mechanism to ensure that the required performance bonds are always in place.

UNAMI accepted recommendation 5 and stated that a mechanism had been implemented to ensure compliance with the contract by contractors to submit performance bonds. Recommendation 5 remains open pending OIOS verification of the mechanism implemented to ensure performance bonds have been obtained for those contracts for which they are required.

Inadequate asset management practices

21. Some 61 of 120 engineering expendables selected for review did not match the quantity recorded in Galileo, and in two cases, there was no record in Galileo. Also, non-expendables were not recorded by serial number and a physical inventory had not been conducted. Additionally, non-expendables procured by UNAMI, valued at \$1,385,402 at the time of taking over the compound in Baghdad, had not been recorded in Galileo.

(6) UNAMI should ensure that periodic physical verification of engineering expendables and non-expendables is conducted, and Galileo up-dated accordingly.

UNAMI accepted recommendation 6 and stated that the first physical verification exercise was conducted in September 2012, and UNAMI plans to do this on a semi-annual basis. Based on the action taken, recommendation 6 has been closed.

B. Project management

Inadequate structures and procedures for managing engineering projects

22. UNAMI had not ensured that it had adequate capacity to implement critical engineering projects. It needed to establish structures and procedures similar to those in comparable missions and promulgated by DFS. These include, *inter alia*: (a) a Project Management Committee; (b) a qualified chief engineer to head the EBMS and to ensure the effective day-to-day management of each project; and (c) procedures for monitoring and reporting on project implementation.

23. The lack of capacity contributed to the overpayments referred to above, as well as:

- Poor project identification and scheduling, as 85 per cent of projects implemented over the last three years were not reflected in the annual work plans. This impacted on UNAMI's ability to properly identify needs and address them.
- Inadequate project-specific planning, as evidenced by the significant differences in some cases between estimated and actual bills of quantities and prices.
- The selection and use of a costly project design without any cost-benefit analysis, resulting in additional costs of \$760,000 compared to those constructed in 2011, and for which the security risk assessment did not identify the need.

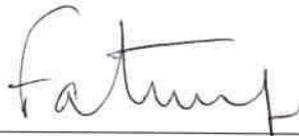
- Lack of segregation of incompatible functions, with the OIC of EBMS being both the certifying officer and requisitioner. The latter role is typically assigned to a project engineer.

(7) UNAMI should, in consultation with the Department of Field Support, put in place appropriate structures and procedures for the management of engineering projects. These include, *inter alia*: (a) a Project Management Committee to help in the identification, approval and oversight of projects; (b) experienced managers for projects; and (c) procedures and requirements for monitoring and reporting on the implementation of projects.

UNAMI accepted recommendation 7 and stated that policy directives and standard operating procedures have been drafted and presented to DFS for review and comment. Recommendation 7 remains open pending receipt of evidence that appropriate structures and procedures are in place.

IV. ACKNOWLEDGEMENT

24. OIOS wishes to express its appreciation to the Management and staff of UNAMI for the assistance and cooperation extended to the auditors during this assignment.



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STATUS OF AUDIT RECOMMENDATIONS
Audit of management of engineering projects in UNAMI

| Recom. no. | Recommendation | Critical/ ¹ Important ² | C/ ³ O ³ | Actions needed to close recommendation | Implementation date ⁴ |
|------------|---|---|--------------------------------|--|----------------------------------|
| 1 | UNAMI should initiate the process for recovering the overpayment of \$632,992 from two contractors. | Critical | O | OIOS verification of the work done by DFS in determining the amount payable to contractors A and B, and evidence of recovery of overpayments made. | 31 December 2012 |
| 2 | UNAMI should, in consultation with the Department of Field Support, carry out an administrative review of all contracts managed by the Engineering and Building Management Section with the aim to identify other overpayments, and initiate action, where appropriate. | Critical | O | Receipt of evidence of the results of DFS' review and the subsequent action taken of UNAMI's engineering contracts | 31 December 2012 |
| 3 | UNAMI should, with immediate effect and in consultation with the United Nations Controller, suspend or withdraw the certifying authority of the Officer-in-Charge of Engineering and Building Management Section (EBMS) and designate a new certifying officer, preferably the Chief, Technical Services, for the EBMS. | Critical | C | Action taken. | Implemented |
| 4 | UNAMI should take appropriate action against Contractor A and Contractor B for claiming payments for work not performed including documenting it as part of the performance evaluation and informing the Vendor Review Committee accordingly. | Critical | O | Receipt of evidence that UNAMI has completed its review of the claims for payment of work not performed by contractors A and B, with appropriate action taken. | 31 December 2012 |

¹ Critical recommendations address significant and/or pervasive deficiencies or weaknesses in governance, risk management or internal control processes, such that reasonable assurance cannot be provided regarding the achievement of control and/or business objectives under review.

² Important recommendations address important deficiencies or weaknesses in governance, risk management or internal 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 UNAMI in response to recommendations.

| Recom. no. | Recommendation | Critical/ Important ² | C/ O ³ | Actions needed to close recommendation | Implementation date ⁴ |
|------------|--|-------------------------------------|----------------------|--|----------------------------------|
| 5 | UNAMI should review of all contracts to ensure that performance bonds are obtained from contractors in accordance with the terms and conditions of the contracts, and establish a mechanism to ensure that the required performance bonds are always in place. | Important | O | OIOS verification of the mechanism implemented to ensure performance bonds have been obtained for those contracts for which they are required. | 31 December 2012 |
| 6 | UNAMI should ensure that periodic physical verification of engineering expendables and non-expendables is conducted, and Galileo up-dated accordingly. | Important | C | Action taken. | Implemented |
| 7 | UNAMI should, in consultation with the Department of Field Support, put in place appropriate structures and procedures for the management of engineering projects. These include, <i>inter alia</i> : (a) a Project Management Committee to help in the identification, approval and oversight of projects; (b) experienced managers for projects; and (c) procedures and requirements for monitoring and reporting on the implementation of projects. | Critical | O | Receipt of evidence that appropriate structures and procedures are in place. | 31 March 2013 |