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INTEROFFICE MEMORANDUM MEMORANDUM INTERIEUR

INTERNAL AUDIT DIVISION
OFFICE OF INTERNAL OVERSIGHT SERVICES

TO: Mr. Azouz Ennifar, Acting SRSG
A: United Nations Mission in Ethiopia and Eritrea (UNMEE)

DATE: 10 January 2007

REFERENCE: AUD-7-5:21 (07-00008)

FROM: Dagfinn Knutsen, Acting Director
DE: Internal Audit Division, OIOS



SUBJECT: **OIOS Audit No. AP2006/624/07: Fuel management at UNMEE**
OBJET:

1. I am pleased to present herewith our final report on the above-mentioned audit, which was conducted in July and August 2006.
2. We note from your response to the draft report that UNMEE has accepted all the recommendations. Based on your response, I am pleased to inform you that we have closed recommendations 1, 4, 5, 8, 14 and 18 in the OIOS recommendations database. In order for us to close out the remaining recommendations, we request that you provide us with the additional information as discussed in the text of the report. Please note that OIOS will report on the progress made to implement its recommendations, particularly those designated as critical (i.e., recommendations 1, 2, 5, 19 and 20) in its annual report to the General Assembly and semi-annual report to the Secretary-General.
3. IAD is assessing the overall quality of its audit process and kindly requests that you consult with your managers who dealt directly with the auditors and complete the attached client satisfaction survey form.
4. I take this opportunity to thank the management and staff of UNMEE for the assistance and cooperation provided to the auditors in connection with this assignment.

Copy to: Mr. Jean-Marie Guéhenno, Under-Secretary-General for Peacekeeping Operations
Mr. Philip Cooper, Director, ASD/DPKO
Mr. Maurice Critchley, Acting Chief Administrative Officer, UNMEE
Mr. Swatantra Goolsarran, Executive Secretary, UN Board of Auditors
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Office of Internal Oversight Services
Internal Audit Division



Fuel management at UNMEE

Audit no: AP/2006/624/07
Report date: 10 January 2007
Audit team: Juanita Villarosa

EXECUTIVE SUMMARY
Fuel management at UNMEE (Assignment No. AP2006/624/07)

OIOS conducted an audit of fuel management at the United Nations Mission in Ethiopia and Eritrea (UNMEE) in July and August 2006. The main objective of the audit was to obtain reasonable assurance on the adequacy and effectiveness of controls over fuel management.

The audit showed that the Mission's fuel management practices need improvement to increase efficiency and deter fraud by: (a) streamlining the multifarious fuel distribution processes; (b) discontinuing the use of fuel coupons; (c) ensuring that the fuel log built into the Carlog equipment installed in vehicles is properly used to record fuel received; and (d) ensuring that users of vehicles which are not equipped with Carlog submit trip tickets that are complete in all respects. Furthermore, bulk fuel ordering, delivery, inspection and verification should be in accordance with practices that assure accountability. Currently, orders from contingents are not supported by justification, and deliveries are not inspected by the Receiving and Inspection (R&I) Unit or by the Fuel Cell Unit at the sectors.

Monitoring of fuel at field locations also needs to be given more attention. Physical inspections of fuel farms were not being conducted regularly, and thus cannot be considered effective. Moreover, inspection and field reports were not being used as tools to gauge field performance and compliance with safety, security and environmental standards. Controls to safeguard fuel assets can best be considered as reactive, rather than proactive. For instance, in May 2006, stricter access control at the Adiguadad fuel farm was implemented only after 37 drums of oil were stolen in March 2006 by the local fuel attendant aided by a non-UN person driving a non-UN vehicle. Likewise, the aviation fuel bladder in Barentu was only replaced by a metal tank when it ruptured spilling over 18,700 liters in September 2005.

The continuity of fuel supply is at risk mainly because fuel pricing and distribution is controlled by the government. Also, fuel stocks held by both civilian and military fuel farms were well below the minimum critical level necessary to ensure continuity of operations in the event of an emergency. The Mission was not using the Galileo system to control and account for the movement of fuel stocks.

There were delays in the payment of fuel contractors' invoices. Invoices were being paid two to three months after they were received by UNMEE, instead of within 30 days as stipulated in the contracts. This sometimes necessitated advance payments to contractors to maintain fuel supply, which were made without properly documenting the reasons for such payments, in violation of UN Financial Regulations and Rules.

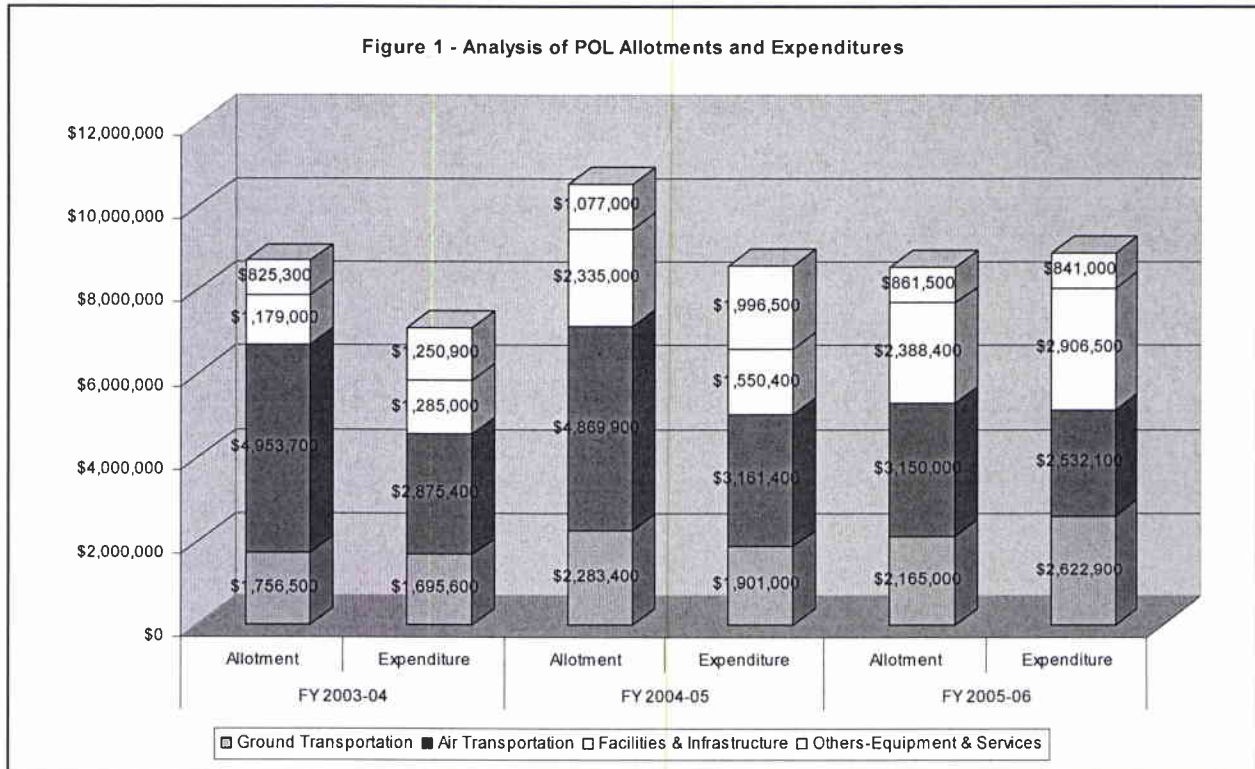
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I. INTRODUCTION

1. OIOS conducted an audit of fuel management at the United Nations Mission in Ethiopia and Eritrea (UNMEE) in July and August 2006. The audit was conducted in accordance with the International Standards for the Professional Practice of Internal Auditing.

2. Figure 1 shows the Mission's allotments and expenditures for petrol, oil and lubricants for the financial years 2003-04, 2004-05 and 2005-06.



3. The Fuel Cell Unit within the Joint Logistics Operation Center (JLOC) is responsible for the management of fuel contracts as well as the receipt, distribution, storage and issuance of fuel, and the related controls and record-keeping. The Unit has three international staff: a P-3 as the Unit head, an FS-5 as Fuel Supervisor, a UNV as Fuel Assistant and two local staff, who are all based in Asmara. A Military Officer assigned as both the fuel and food officer assists the Unit on a part-time basis. These staff are expected to monitor and supervise the fuel operations in 11 military ground fuel farms, three civilian fuel farms and two aviation fuel farms as well as to analyze fuel distribution reports from 18 UNMO teamsites and three sector headquarters, among others.

4. Tables 1, 2, and 3 show the quantity of fuel consumed for each of the financial years 2003-04, 2004-05 and 2005-06 in relation to the number of vehicles, generators and aircraft used by the Mission.

Table 1 – Consumption of aviation fuel

FY	Fuel consumed (in liters)	Number of aircraft	Hours flown
2003-04	4,951,285	12	7,082
2004-05	4,347,702	11	6,207
2005-06	2,671,544	10*	3,216

* Reduced to 6 after 15 December 2005

Table 2 – Consumption of fuel for COE* vehicles and generators

	FY 2003-04	FY 2004-05	FY 2005-06
Fuel consumed (in liters)	No data	2,633,148	2,574,229
Number of vehicles/ equipment	779	666	528
Number of generators	75	75	75

* COE = Contingent-owned equipment

Table 3 – Consumption of fuel for UNOE*-vehicles and generators

	FY 2003-04	FY 2004-05	FY 2005-06
Fuel consumed (in liters)	No data	1,446,240	1,518,563
Number of vehicles/ equipment	479	481	478
Number of generators	194	194	194

* UNOE = UN-owned equipment

5. Table 4 shows the various contracts for the supply of fuel to UNMEE:

Table 4 – Active fuel contracts

Contract number	Name of Fuel Vendor	NTE Amount*	Terms and major provisions Per the Mercury listing
03/036	Total Eritrea	ERN18,170,267	July 2005 to June 2008 For diesel, petrol and kerosene at Bada and Senafe
05/040	Total Ethiopia	\$938,898	May 2005 to December 2006 Aviation fuel to Adigrat, Ethiopia
03/023	Tamoil Eritrea	\$10,275,600	January 2003 to December 2008 Aviation fuel
003/034 A2	Tamoil Eritrea	ERN91,905,763	January 2003 to 30 June 2008 Ground fuel for Barentu, Shilalo, Shambico and Omhajer
05/022	Mobil Oil East Eritrea	ERN100,584, 163	March 2005 to June 2008 Ground fuel for Asmara, Assab, Adiquala
05/024	Mobil Oil East	\$7,824,853	March 2005 to December 2008

	Eritrea		Supply of aviation fuel in Asmara
06/018	Shell Ethiopia	ETB2,781,200	24 March 2006 to 31 December 2007 Provision of fuel in Axum

* ERN = Eritrean Nakfa; ETB = Ethiopian Birr

6. The comments made by the management of UNMEE on the draft report have been included in the report as appropriate and are shown in italics.

II. AUDIT OBJECTIVES

7. The objectives of the audit were to:

- (a) Assess the adequacy and effectiveness of controls over fuel management;
- (b) Verify compliance with the established rules, regulations, policies and procedures on fuel management;
- (c) Assess the contractor's compliance with the fuel contract terms and conditions;
- (d) Ascertain whether there was adequate documentation supporting the ordering of fuel products, their receipt, distribution and utilization, and fuel balances on hand to obtain reasonable assurance that there was no loss to the Organization through mismanagement, abuse, theft or other undesirable practices;
- (e) Ascertain whether the Mission's safety, security and environmental practices as regards fuel operations were in compliance with the established UN and local regulations; and
- (f) Determine whether there was a plan to ensure the continuity of fuel supply to the Mission in case of contingencies.

III. AUDIT SCOPE AND METHODOLOGY

8. The audit covered the management of petrol, oil and lubricants (POL) for ground and air transportation and generators, and involved file reviews, site visits and interviews with key Mission personnel as well as contractor's personnel and contingents. Physical verification and reconciliation of POL inventories, and test of transactions were performed on a sample basis. OIOS also analyzed the distribution and consumption of POL at the Mission.

IV. AUDIT FINDINGS AND RECOMMENDATIONS

A. Standard operating procedures and guidelines on fuel management

Requisitioning, ordering, delivery and inspection of bulk fuel

9. Paragraphs 3.49 to 3.51 of SOP 3-41 in the Fuel Cell Manual specify the reports needed to justify or support requisitions for bulk fuel. OIOS' audit tests showed that bulk fuel requisitions raised by the civilian and military farms were not supported by any of the required reports. Moreover, deliveries of fuel were not independently inspected or acknowledged:

- Deliveries were not physically inspected by the R&I Unit or the Fuel Cell, thereby casting doubt on the accuracy of the contractors' invoices. Although the R&I Unit issued inspection reports, these were not based on actual physical inspection and were prepared only to produce documentation to show compliance with the prescribed process in the Mercury system;
- Delivery notes were not properly filled out by the end-users. The quantity of fuel received was not indicated in the delivery note. Acknowledgment of receipt of fuel delivered was limited to the stamp "Fuel Received", without quantity, in the delivery note.

Recommendations 1 to 3

The UNMEE Administration should:

- (i) Establish reorder levels and ensure that requisitions made by both ground and aviation fuel farms for bulk orders are supported by the fuel monitoring reports specified in SOP 3-41 of the Fuel Cell Manual (AP2006/624/07/01);
- (ii) Ensure that spot checks on fuel deliveries are conducted by the Receipt and Inspection Unit, in order to ascertain that deliveries are in accordance with ordered specifications (AP2006/624/07/02); and
- (iii) Ensure that columns in the delivery notes intended for the Mission representatives are properly filled in by authorized persons whose names are identifiable on the delivery notes (AP2006/624/07/03).

10. *The UNMEE Administration accepted recommendation 1 and explained that since October 2006, fuel consumption at all fuel farms is monitored on a daily basis and re-supplies are made on a centrally worked out quota system. Based on the Mission's response, recommendation 1 has been closed.*

11. *The UNMEE Administration accepted recommendation 2 and explained that it has been partially implemented. Although all deliveries in Asmara are subjected to a 100 per cent check by both the Fuel Cell and the R&I Unit, R&I Unit has not been able to do these checks in the sectors. Recommendation 2 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

12. *The UNMEE Administration accepted recommendation 3 and explained that incomplete Delivery Notes are rejected. Recommendation 3 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

Issuing fuel in bulk or by vehicle to various users

13. The Mission has resorted to various ways of issuing fuel to end-users (see Charts 1 and 2 at Annex I) which makes control and monitoring more time-consuming, tedious and less effective. Table 5 summarizes the means through which fuel is issued.

Table 5 – Issuance of fuel through various means

Issuance of	Issuance through
Bulk issuances of fuel	Handover vouchers
Aviation fuel in fuel farms	Aviation coupons in fuel farms
Aviation fuel for direct refuellings	Aviation delivery receipts of contractors
Vehicle issuance in Asmara and sectors	Daily trip tickets
Vehicle issuances in Assab	Fuel credit coupons
Vehicle issuances by UNMOs until early 2006	Fuel cash coupons
Vehicle issuances in Addis Ababa	Fuel e-cards

14. OIOS' review of the various issuance processes show the need for stronger controls, as explained below:

(a) Bulk issuances - Handover vouchers show the transfer of fuel accountabilities, but do not establish the necessity of issuing fuel. Requests for bulk fuel should be supported by the requirements for a specific period and the average number of days of supply remaining.

(b) Coupon system - There is a need to stop the issuance of both cash and credit coupons which is also prohibited under paragraph 3.93 of SOP 3-71 of the Fuel Operations Manual, which states that "any form of fuel coupon is effectively another form of currency that will be readily exploited by unscrupulous individuals". Deficiencies noted in the way coupons are handled are as follows:

(i) An inventory count of available coupons in the custody of the Fuel Cell showed that the coupons are not properly controlled and accounted for. A scrutiny of the handover vouchers and the earlier accountable form registers used (which was discontinued later) showed that forms were not issued consecutively. For instance, cash coupons bearing serial numbers 08762689 to 08762788 were issued on 2 August 2004 whereas forms bearing earlier series were issued in October 2005.

(ii) The Fuel Cell is of the view that unauthorized use is not possible because issued forms are properly accounted for before they are paid. This could not have been so, since Debit Note FD003722 considered as paid credit coupons (4805, 4806, 4808, 4809, 4811, 4814, 4989, 4991, 4992, 4897, 4810, 4812, 4540, 4804 and 4851) were part of the unaccounted series 4201 to 6750. The possibility that these or any other unaccounted forms were lost and subsequently used by unauthorized persons is serious because these coupons can be honored by any authorized gasoline dealer when presented.

(c) Daily trip tickets - Users of vehicles fitted with the CarLog system do not log in the fuel issued to them as instructed, supposedly because they were not aware that this is necessary. Logged-in fuel data could have been used to verify fuel issuance and

consumption, in accordance with Section 3.55.22 and 3.55.23 of the Fuel Operations Manual.

(d) E-card system - as described by a user, works as follows: "When a vehicle has been refuelled at a (Total Ethiopia) petrol station, the attendant inserts a card into a portable registry machine, asks the driver the PIN code, enters a number of liters of withdrawn fuel and the current mileage of the vehicle. Then the machine prints two checks. The driver signs on each. One check remains at the fuel station and the other has to be submitted to the Transport Section. In addition to other information, mileage at previous refueling, mileage at current refueling, and automatically calculated consumption per 100 km is printed on the check." Control mechanisms of this system include: the pin code, the confidentiality of which is the responsibility of the vehicle user; the 2,000 Ethiopian Birr (around \$111) per month limitation and the limit per refueling, i.e., 50 liters for individual 4x4 vehicles and minibuses. Control enhancements required will be: the inclusion of the users' UN ID numbers on the fuel contractor's invoices to ascertain that vehicle drivers are authorized to draw fuel, and the change of the pin codes every time the vehicle is assigned to a new user.

(e) In lieu of aviation coupons, there is a need for a proforma aviation fuel request form signed by the pilot of the aircraft needing such fuel. These forms should be submitted to the fuel farm attendants, who should use them as the basis for the fuel issuances made.

Recommendations 4 to 7

The UNMEE Administration should:

(i) Require requisitioners of bulk fuel to support their requests with an estimate of the fuel requirements for a specific period and the average number of days' fuel yet to be consumed (AP2006/624/07/04);

(ii) Stop the issuance of fuel using the coupon system and inform users and fuel contractors and gasoline dealers of such decision. All unused coupons should be properly accounted for and cancelled by the Fuel Cell (AP2006/624/07/05);

(iii) Ensure the full implementation of daily trip tickets and aviation fuel issue forms to support vehicle and aviation fuel issuances in lieu of coupons (AP2006/624/07/06); and

(iv) Require the fuel contractor to record the UN ID numbers of vehicles drawing fuel under the e-card system. Moreover, PIN codes should be changed every time a new authorized user is assigned for a specific vehicle (AP2006/624/07/07).

15. *The UNMEE Administration accepted recommendation 4 and stated that fuel is now allotted under the quota system, as explained in the Mission's response to recommendation 1.* Based on the Mission's response, recommendation 4 has been closed.

16. *The UNMEE Administration accepted recommendation 5 and explained that Fuel Coupons have been completely abolished since September 2006. Based on the Mission's response, recommendation 5 has been closed.*

17. *The UNMEE Administration accepted recommendation 6 and explained that it has been partially implemented. Recommendation 6 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

18. *The UNMEE Administration accepted recommendation 7 and explained that the Mission is discussing the issue with the vendor in Addis Ababa because the vendor has to make certain modifications to the system to implement the recommendation. Recommendation 7 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

B. Contract management

Monitoring of the NTE amount

19. Section 3.32 of SOP 3-28 (Fiscal Accounting-Monitoring Expenditure) states that it is essential to track the funds obligated because the Fuel Unit "has no control over how much fuel will be consumed—funds obligated within the purchase order may run out before the anticipated end date or it may actually be more than anticipated in which case excess funds can be redirected to other requirements." The same section recommends the use of a simple Excel spreadsheet to monitor purchase orders, the expenditure of funds and invoice dates, and payments made to ensure that the balance of funds are not overexpended.

20. OIOS found that the Mission did not have such a spreadsheet for monitoring fuel purchase orders. According to the Fuel Cell, the use of the spreadsheet was discontinued because fuel purchases can be controlled through the Mercury System. The Fuel Cell could not have properly ensured that the NTE amount is controlled because entries in the system were made by the Procurement Section only when invoices were processed for payment. It takes one to three months before an invoice reaches the Procurement Section, which means that the database can only be updated one to three months after the date of fuel delivery.

Recommendation 8

The UNMEE Administration should ensure that the Fuel Cell, in coordination with the Procurement Section, maintains an Excel spreadsheet to monitor the utilization of funds obligated for fuel purchases (AP2006/624/07/08).

21. *The UNMEE Administration accepted recommendation 8 and explained that a spreadsheet to monitor PO utilization has been implemented by the Fuel Cell and that individual PO running balances are monitored on an ongoing basis. Based on the Mission's response, recommendation 8 has been closed.*

C. Payments to vendors

22. According to existing fuel contracts, vendors should be paid within 30 days of invoice presentation. Representatives of two fuel contractors (Tamoil Eritrea and Total/Mobil Eritrea)

indicated that their fuel deliveries had not been paid one month after invoice issuance and cited the invoices submitted by Mobil/Total for the period February to June equivalent to \$290,229; and Tamoil/Shell's May and June 2006 invoices equivalent to \$329,179.

23. OIOS' analysis of the payment process showed that on average, it takes 30 days for the Fuel Cell to verify an invoice, 14 days for R&I to process a report and 18 days for the Finance Section to process payments, or a total of 62 days or 2 months, instead of the 30 days indicated in the fuel contracts.

24. Verification also showed that advance payments were made to fuel contractors, particularly Total Ethiopia. An interoffice memorandum issued by the Finance Section indicated that advance payments were made "because fuel invoices have not been received from Total Ethiopia (pertaining to March and April 2006)..." The Fuel Cell supervisor explained that advances had to be paid because the contractor threatened to stop delivery of fuel if advances were not paid for new deliveries owing to payment delays.

Recommendation 9

The UNMEE Administration should streamline the processing of invoices to comply with the contract provision requiring invoices to be paid within 30 days following their receipt (AP2006/624/07/09).

25. *The UNMEE Administration accepted recommendation 9 and explained that the Fuel Cell has implemented a procedure to complete the verification of all properly supported invoices within seven days of receipt and pass them on to the R&I Unit. Recommendation 9 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

D. Continuity of fuel supply

26. According to the Chief of the Fuel Cell, the Mission does not maintain any strategic or minimum stock levels. Rather, reordering was being made when the available stock was 60 to 70 per cent of the farm capacity. OIOS was informed that in the absence of the Mission Electronic Fuel Accounting System (MEFAS), field stock levels cannot be reliably monitored. In the meantime, the Fuel Cell uses the daily stock levels and weekly/monthly fuel reports received from military contingents and team sites. The reported weekly holdings for the period 3 to 24 July 2006 showed only an average holding of 40 per cent of capacity instead of 50 per cent (see Table 6), as indicated in paragraph 3.50.1 of SOP 3-41. Moreover, the zero quantity reported for some weeks below indicate that levels of fuel stock are not accurately reported and adequately monitored.

Table 6 – Weekly holdings of fuel

Contingents	Total Capacity	Acceptable (50%)	Reported fuel holdings per week July 2006				Average holding
			3 July	10 July	17 July	24 July	
IndBatt	220,060	110,030	83,827	119,018	113,560	21,998	38%
BanEngrs	17,400	8,700	5,913	0	0	0	8%
FRC	7,600	3,800	0	1,758	0	442	7%

JORBATT	126,660	63,330	37,451	24,758	13,038	43,961	24%
KENDEM	87,000	43,500	58,963	48,060	72,958	68,000	71%
CEC	30,000	15,000	8,504	24,772	24,249	23,805	68%
KENCOY	25,000	12,500	0	17,512	0	0	18%
Level II Hospital	60	30	10	40	40	60	62%
Total	513,780	256,890	194,668	235,918	223,845	158,266	40%

Recommendations 10 and 11

The UNMEE Administration should ensure that:

- (i) The fuel stocks held by various contingents and civilian fuel farms are within the 50 per cent critical level required (AP2006/624/07/10); and
- (ii) The Mission Electronic Fuel Accounting System is installed in the Mission so that fuel stock is monitored on a timely basis (AP2006/624/07/11).

27. *The UNMEE Administration accepted recommendation 10 and stated that the Mission's minimum reserve policy of 21 days in stock has always been maintained. Recommendation 10 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

28. *The UNMEE Administration accepted recommendation 11 and explained that, when the Mission clarified with DPKO, the present implementation programme allows for the roll out of MEFAS in four missions only and UNMEE is not one of them. The Mission further stated that it will continue to follow up with DPKO the issue of the implementation of MEFAS in UNMEE. Recommendation 11 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

E. Monitoring of fuel distribution and consumption

29. Fuel activities were not adequately monitored in the sectors. According to the Fuel Cell Chief, quarterly inspections cannot be performed because of the difficulty to travel by land to locations easily reached by helicopter before the helicopter ban imposed by the Eritrean government. Another reason is the lack of staff specifically assigned to perform monitoring activities. Inspections are presently assigned to the UNV Fuel Assistant who is also responsible for warehousing and accounting functions of fuel farms in Asmara. As a result, inspections conducted at locations away from Asmara are too infrequent:

- Shilalo – six months ago excluding the audit inspection done in July 2006
- Barentu – 10 to 12 May 2006; after six months
- Assab – none
- Adigrat – 20 to 21 July 2006; after one year
- Shambiko – 10 to 12 May 2006; after six months

30. OIOS' visit to the following fuel installations showed inadequacies against the following inspection criteria:

Inspection criteria	Shilalo Military	Civilian-KenCoy	Military-KenCoy	Military CEC	Civilian Adiguadad	Barentu Done by SAO
1. Reported fuel balances reliable? Book balance matches with actual count balance based on available calibrated dipsticks?*	No	No	No	No	No	Yes
2. Calibrated dipsticks maintained for each tank, fuel bladder?	No	No	No	No	No	Yes
3. Access limited to authorized persons? Site secured with perimeter fences, guards?	No	Yes	No	Yes	No	Yes
4. POL in stock properly stored?	No	NA	No	No	No	Not checked
5. Issuance supported with documentation?	Yes	Yes	No	Yes	Yes	Yes
6. Fuel maintained in proper storage facilities?	No	Yes	Yes	No	No	No
7. Vehicle odometers sampled running?	No	NA	Yes	Yes	NA	Yes
8. All generators running?	No	NA	No	Yes	NA	Yes
9. Fuel meters calibrated?						No

* There were no calibrated dipsticks to measure the fuel stored in tanks and fuel bladders. Hence, OIOS cannot and does not express an opinion on the reliability of recorded fuel balances.

31. Specifically, OIOS observed the following, in relation to the “no” assessments given above:

(a) The lack of calibrated dipsticks casts doubt on the reliability of the recorded fuel balances.

(i) An estimated 100,000 liters of fuel are stored inside fuel bladders in Senafe and Adiguadad. The fuel custodians contend that there is no way for them to measure the contents of the bladders in the absence of bladder dipsticks. Specialized dipsticks should have been used to approximately measure the fuel bladders’ contents in accordance with SOP 3.28 specifically Section 3.29.7;

(ii) An estimated 149,000 liters of fuel stored inside drums (in the case of Senafe), fuel tanks and trucks (in Adiguadad, Senafe and Asmara) also cannot be accurately measured. In Senafe, a linear dipstick was used in conjunction with a “look-up” table. In KenCoy, fuel trucks do not have dipsticks and as such, the dipstick used in the civilian farm had to be used. SOP 3-57 (particularly Section 3.70.2) states that for a dipstick to be regarded as accurate, it must have been calibrated for the specific tank that it serves. Section 3.70.2.1 further states that linear measurement dipsticks should only be regarded as an approximate measure, with the authenticity of “look up” tables viewed with a degree of skepticism.

(b) The lack of physical controls over fuel stored provides opportunities for pilferage and theft. Fuel inside the Senafe IndBatt camp and the civilian fuel farm in Adiguadad were not inside fenced premises that can be accessed only by authorized persons.

(c) There is a need for the proper accounting and control over oil and lubricants issued to users and those stocked inside the Fuel Cell containers in Adiguadad:

- (i) Oil and lubricants were not properly stored by the IndBatt in Senafe, the IndBatt in CEC and the KenCoy in Asmara. Some of the oil drums at the KenCoy were stored near the garbage area while others are scattered inside the gymnasium. In the case of the IndBatt in Senafe and in CEC, the drums were stored inside unlocked tents or containers;
- (ii) The Fuel Cell also needs to be properly account for POL stocks. Physically, most of the stocks stored inside locked containers are well arranged with proper bincards. However, the Fuel Cell acknowledged that some of the stocks have not yet been counted. Oil stored in drums, on the other hand, were stocked in the open, inside the fuel farm. Thirty-seven of these oil drums were irregularly withdrawn by a local Fuel Assistant and transported in a non-UNMEE truck driven by a non-UNMEE driver in March 2006;
- (iii) The movement of POL still in the custody of the Fuel Cell cannot be properly monitored because these are not included in the list of inventory items for accounting in the Galileo system. As of 17 July 2006, the value of 26 types of oil/lubricant products in stock is unknown.
- (d) There is a need for the replacement of fuel bladders with rigid metal fuel tanks. The Fuel Operations manual (particularly 2.22 “Planning a Mission Start-up”) states that fuel bladders should be replaced by metal fuel tanks within 9 to 18 months after the mission start-up. However, fuel stored inside bladders still represents 46 per cent of the total fuel capacity of the Mission. These fuel bladders were installed without due regard to the required 1:50 sloping and draining features. The continued use of fuel bladders also resulted in the loss of some 18,700 liters of aviation fuel in Barentu when a fuel bladder ruptured in September 2005;
- (e) There was no uniformity in the records maintained by the military contingents. Although the required reports were submitted to the Fuel Cell, the basis of these reports varied among contingents. The IndBatt maintained records used by the Indian army, whereas the KenCoy used notebooks to account for fuel movements. The civilian camps, on the other hand, maintained records prescribed by the Fuel Cell;
- (f) There is a need to monitor generator and vehicle utilization and fuel consumption in field locations. A test run of one vehicle at the IndBatt in Senafe showed one defective odometer. The frequency of use of generators should also be matched against the reported fuel consumption because some of the generators were not operating in Senafe and at the KenCoy in Asmara.

Recommendations 12 to 18

The UNMEE Administration should ensure that:

- (i) The Fuel Cell conducts periodic inspections to monitor the fuel activities in field locations, particularly in respect of the reliability of the reports on fuel consumption relating to vehicles and generators (AP2006/624/07/12);

- (ii) The Fuel Cell provides calibrated fuel dipsticks at field locations (AP2006/624/07/13);
- (iii) The Fuel Cell initiates the construction of perimeter fences at all fuel installations, civilian and military (AP2006/624/07/14);
- (iv) The Galileo database administrator enables the recording of data pertaining to fuel products (oil and lubricants) in the database based on Receiving and Inspection reports, with either the Fuel Cell or the Supply Section being responsible for monitoring the movement of fuel stocks (AP2006/624/07/15);
- (v) The Fuel Cell verifies the proper maintenance and storage of oil and lubricants at field locations to ensure that they are kept inside locked containers with access granted only to authorized individuals (AP2006/624/07/16);
- (vi) The Fuel Cell initiates action to replace fuel bladders with rigid metal tanks (AP2006/624/07/17); and
- (vii) The Fuel Cell trains the fuel logistics personnel at field locations on the proper records and reports to be prepared and maintained to ensure uniformity (AP2006/624/07/18).

32. *The UNMEE Administration accepted recommendation 12 and explained that more regular inspection visits are planned from November 2006 onward and that regular visits were hampered by the lack of helicopter flights and the restrictions on road movements by national staff. Recommendation 12 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

33. *The UNMEE Administration accepted recommendation 13 and explained that it will be implemented by February 2007. Recommendation 13 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

34. *The UNMEE Administration accepted recommendation 14 and explained that the construction of perimeter fence at the Adi Guadad Logistics Base has been completed on 27 November 2006 and that all other fuel farms are within fenced military camps, secured by military contingents. Based on the Mission's response, recommendation 14 has been closed.*

35. *The UNMEE Administration accepted recommendation 15 and explained that the Galileo database administrator has enabled the recording of data pertaining to oil and lubricants and that the actual recording of such products in the database will be made upon the arrival of oils and lubricants on order. Recommendation 15 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

36. *The UNMEE Administration accepted recommendation 16 and explained that it will be made a part of inspection visits (see Mission response to recommendation 12). Recommendation 16*

remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.

37. *The UNMEE Administration accepted recommendation 17 and explained that it will be implemented by June 2007. The Mission added that 10 metal tanks were procured in 2005 to replace fuel bladders, but they were not deployed in the field due to the uncertainty of the Mission's future. Given the fuel situation in the Mission, the metal tanks are being used for storing strategic reserves centrally in Asmara. Two more replacements are planned within January 2007. One tank has been commissioned at Adigrat to increase the storage capacity there. Requisitions have been raised for tanks to replace the aviation fuel bladders in Adigrat. Recommendation 17 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

38. *The UNMEE Administration accepted recommendation 18 and explained that fuel conferences are held routinely, especially after troop rotations, to explain the accounting requirements. Fuel reports are reconciled on a monthly basis and discrepancies highlighted and resolved on an ongoing basis. Based on the Mission's response, recommendation 18 has been closed.*

Fuel reports

39. The following reports from various field fuel installations were used mainly as inputs to the reconciliation report prepared by the Fuel Cell. In OIOS' opinion, valuable information can be extracted from these reports and be used for further analysis and decision making purposes.

Reports received	Could be used to evaluate
Daily and weekly fuel status reports for generators and utilities	Average daily uplift; average number of days of supply remaining in location; percentage of fuel holdings (should not be less than 50 per cent)
Weekly state of fuel	Days of supply reserve; percentage of fuel holdings (not less than 50 per cent)
Fuel consumption by vehicles report	Reasonableness of fuel used by vehicles Reliability of reported fuel consumed by vehicles if matched with inspection reports showing vehicles with defective odometers.
Fuel log report from the Transport Section	Reliability of reported fuel consumption by vehicles
Fuel consumption by generator report	Reliability of reported fuel consumed if matched with inspection reports showing defective generators
Yearly reconciliation report	Establish loss of fuel by evaporation and other causes, and whether the loss is within the allowable limits.

Recommendation 19

The UNMEE Administration should ensure that the Fuel Cell utilizes available field fuel reports to analyze field performance and to identify unusual and irregular fuel consumption (AP2006/624/07/19).

40. *The UNMEE Administration accepted recommendation 19 and explained that consumption trends are monitored on a monthly basis and irregularities are queried and reconciled.*

Recommendation 19 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.

F. Safety, security and environmental practices

41. OIOS' review of existing safety, security and environmental practices in the Mission showed that the following measures have not been instituted:

- (a) Response plan for risks such as fire, fuel spillage, accident/injury, aircraft incident, bomb threat and electrical power loss;
- (b) Procedures to detect and clean up spillage to protect the environment and avoid fire hazard;
- (c) Routine checks for leakages, and records of such checks;
- (d) Regular checks of fire extinguishers;
- (e) Daily checks of water drain measures at sample locations;
- (f) Daily and monthly checks of hoses at sample locations;
- (g) Daily and monthly checks of pressure differential gauges at sample locations; and
- (h) Daily and monthly checks of electrical bonding cables at sample locations.

42. The required "no smoking" and other warning signs have been displayed in the fuel farms and stations visited, and fire extinguishers had been installed at the required locations. Inspections made by the sector administrative officers on behalf of the Fuel Cell on 21 August 2006 however showed that in the Shilalo fuel farm, there is a need to increase the number of fire extinguishers, to put up more "no smoking" signs, and to check the expiration of fire extinguishers.

43. Security measures were mainly implemented as a reaction to incidents of theft and pilferage, rather than in anticipation of the risks. For instance, the loss of 37 fuel drums in Adiguadad resulted in stricter security checks of non-official/visitors' vehicles to the fuel farm with the clearance of the Fuel Cell. The loss of 18,700 liters of aviation fuel due to the unexplained rupture in the fuel bladder in September 2005 resulted in the transfer of the remaining fuel to hard tanks.

44. In OIOS' opinion, the Mission needs to take a more proactive approach by identifying and implementing measures that will minimize the risks posed to the safety and security of fuel farms and to the environment.

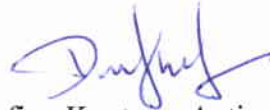
Recommendation 20

The UNMEE Administration should require the Fuel Cell Unit to take steps to identify and address the safety, security and environmental risks in the various fuel farms (AP2006/624/07/20).

45. *The UNMEE Administration accepted recommendation 20 and explained that it has been partially implemented and that full implementation will be done by June 2007. Recommendation 20 remains open pending receipt of documentation from UNMEE showing that it has been fully implemented.*

V. ACKNOWLEDGEMENT

46. We wish to express our appreciation to the Management and staff of UNMEE for the assistance and cooperation extended to the auditor during this assignment.



Dagfinn Knutsen, Acting Director
Internal Audit Division, OIOS

**Chart 1
Fuel Issuance –Ground Fuel**

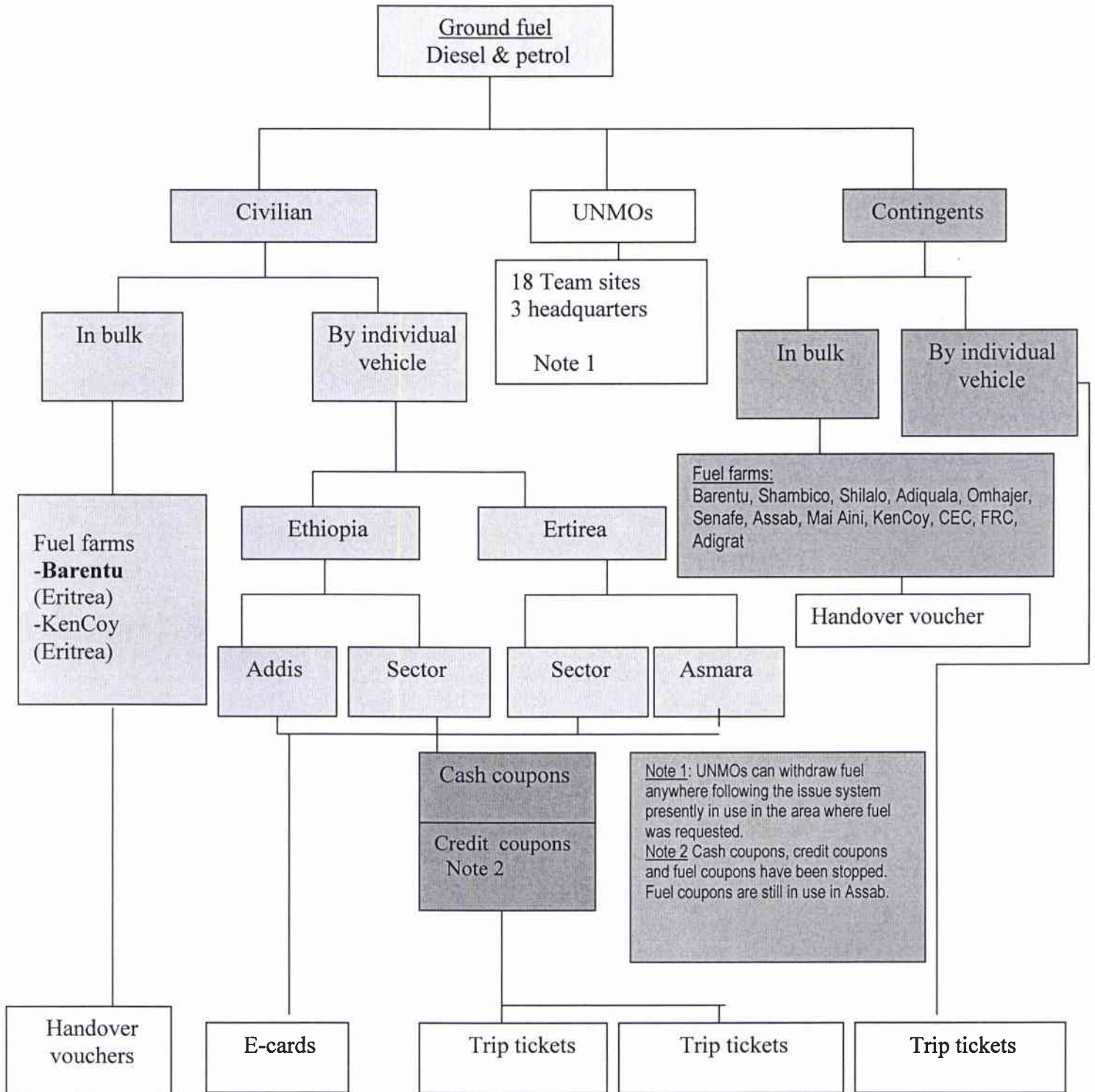
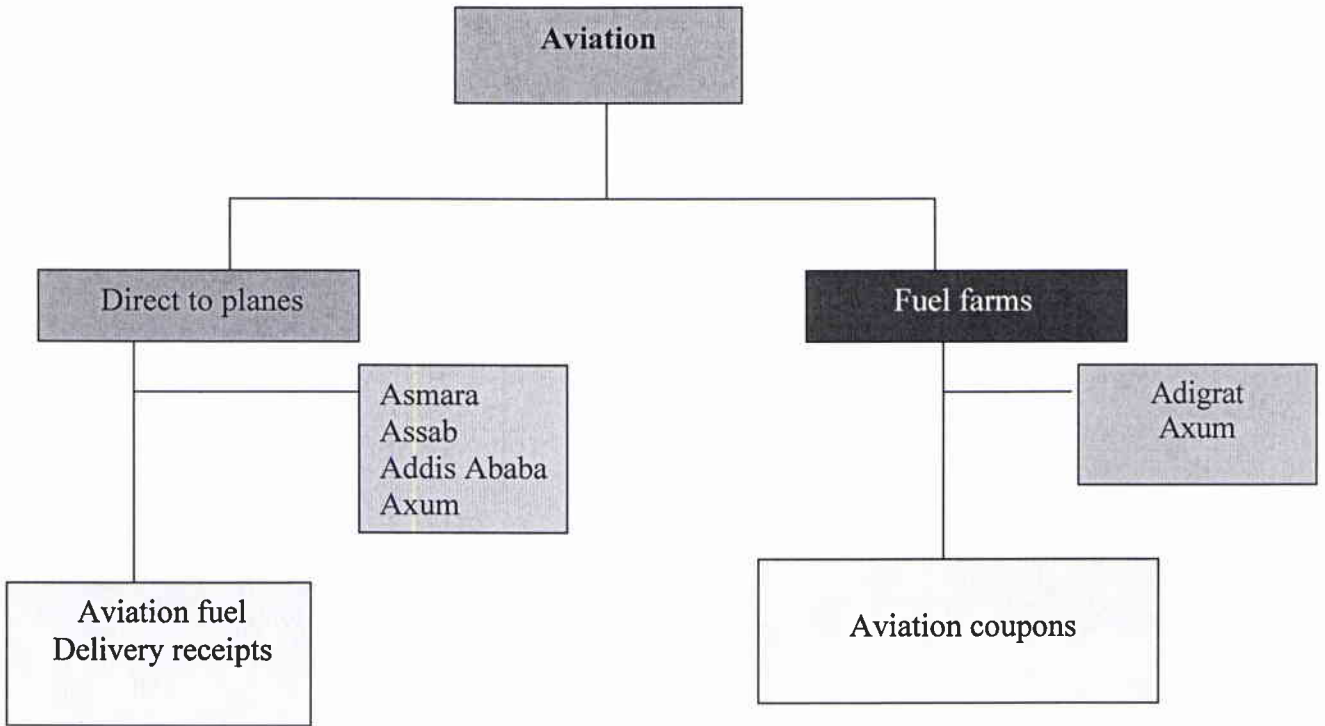


Chart 2
Fuel Issuance- Aviation Fuel



UNITED NATIONS



OIOS Client Satisfaction Survey

Audit of: Fuel management at UNMEE

(AP2006/624/07)

	1	2	3	4	5
By checking the appropriate box, please rate:	Very Poor	Poor	Satisfactory	Good	Excellent
1. The extent to which the audit addressed your concerns as a manager.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. The audit staff's understanding of your operations and objectives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Professionalism of the audit staff (demeanour, communication and responsiveness).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. The quality of the Audit Report in terms of:					
• Accuracy and validity of findings and conclusions;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Clarity and conciseness;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Balance and objectivity;	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
• Timeliness.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. The extent to which the audit recommendations were appropriate and helpful.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. The extent to which the auditors considered your comments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Your overall satisfaction with the conduct of the audit and its results.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please add any further comments you may have on the audit process to let us know what we are doing well and what can be improved.

Name: _____ Title: _____ Date: _____

*Thank you for taking the time to fill out this survey. Please send the completed survey as soon as possible to:
 Director, Internal Audit Division-1, OIOS
 By mail: Room DC2-518, 2 UN Plaza, New York, NY 10017 USA
 By fax: (212) 963-3388
 By E-mail: iad1support@un.org*