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DDAS Accident Report

Accident details

Report date: 01/08/2006	Accident number: 430
Accident time: 10:30	Accident Date: 20/02/2001
Where it occurred: 4km N.W. Omhajer Village, Gash Barka	Country: Eritrea
Primary cause: Unavoidable	Secondary cause: Management control inadequacy
Class: Survey accident	Date of main report: 27/02/2001
ID original source: [Name removed]	Name of source: [Name removed]
Organisation: [Name removed]	
Mine/device: AT blast	Ground condition: Unsurfaced road
Date record created: 01/08/2006	Date last modified: 01/08/2006
No of victims: 1	No of documents: 4

Map details

Longitude:	Latitude:
Alt. coord. system: GR CA 423 901	Coordinates fixed by:
Map east:	Map north:
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

Inadequate medical provision (?)

Inadequate communications (?)

Inadequate training (?)

Accident report

A Board of Inquiry report from the UNMEE Mine Action Coordination Centre was made available in 2004. It is reproduced below, edited for anonymity.

27 February 2001

REPORT OF BOARD OF INQUIRY INTO LANDMINE INCIDENT 20 FEBRUARY 2001

See Distribution.

References:

- A. Map. Russian Military Topographic Series. Sheet 62.
- B. MACC Draft Technical and Safety Standards Dated February 2001.
- C. [Demining group] SOPs for dangerous area surveys.

REPORT OF BOARD OF INQUIRY INTO LANDMINE INCIDENT 20 FEBRUARY 2001

INTRODUCTION

1. As a result of a landmine incident on 20 February 2001, a Board of Inquiry was convened by the UNMEE Mine Action Coordination Centre to conduct an investigation on behalf of the United Nations, in accordance with the requirements of the UNMEE MACC Standards. The initial report of the incident is shown at Annex A.
2. At approximately 11:00hrs on 20 February, a left hand drive Land Rover with add-on armour for mine protection, crewed by a [Demining group] Survey Team struck a landmine. The vehicle's front left wheel area and part of the engine were extensively damaged. There were no serious injuries.
3. The incident involved a Survey Team from [Demining group]'s Asmara office, which was collecting information about a suspect area of ground as part of a wider survey in Sector West.
4. The Board comprised:
 - a. [Name removed] Chief of Operations UNMEE MACC-Chairman.
 - b. [Name removed] Chief of Information UNMEE MACC-Member of the board.
 - c. [Name removed], representing [Demining group] was present throughout the Board of Inquiry investigation including all interviews.
5. A copy of the Board's Terms of Reference is attached at Annex B.
6. The Board of Inquiry team visited Omhajer on the day after the incident and interviewed all persons associated with the incident., with the exception of [Name excised] who was unavailable during the investigation visit. It was not possible to approach the wrecked vehicle due to the threat of landmines and so a helicopter was used to look down on the vehicle and area. Three circuits were made of the area during the flight into Omhajer and a further two circuits were made during the flight out of Omhajer.

SEQUENCE, DOCUMENTATION AND PROCEDURES OF TASKING

7. The survey task that the personnel involved in this incident were involved in was part of a wider contract, funded by the US State Department for Survey activities in the TSZ.
8. Sequence of tasking was directed by [Demining group] from Asmara. [Demining group] state that this area was selected because of the proximity of the local JORBAT Company site and that the task was also a continuation of earlier [Demining group] surveys in that area. Also, UNHCR had informed [Demining group] during a liaison visit by the team to UNHCR Tesseney that up to 30,000 refugees or IDPs would be expected to return to Omhajer area soon, probably from 15 March.
9. [Demining group] also state that this survey was being carried out in the Omhajer area as an extension of a previous tasking from UNMEE MACC for work in Omhajer village. No tasking was requested from UNMEE MACC for any areas outside Omhajer village. No report of this tasking was provided to UNMEE MACC by [Demining group] prior to the incident.

GEOGRAPHY

10. The incident occurred near North West to of the village of Omhajer, in the South Western area of Gash Barka administrative zone, Grid Reference CA 423 901.

11. The area where the incident occurred is rough terrain, generally flat or gently sloping. Grass and vegetation is very sparse, the area is currently almost barren but is ploughed in preparation for planting and some parts of the area are thinly covered with small trees and bushes. The ground was dry at the time of the incident.

12. The Land Rover was travelling on an un-surfaced track that runs through the area; edges of the track are not well defined. The nearest main road is the Omhajer to Guluje route, approximately four kilometres away and this is also un-surfaced. The point where the mine detonated was on the track, directly beneath the front offside wheel.

13. The nearest buildings are near close to the main road junction, passed by the team on the way to the survey area, approximately four kilometres away. The village of Omhajer is approximately four kilometres to the southeast of the incident site.

14. There are lines of defensive trenches near to the area; the closest trench line is approximately 600 metres to the south from the point of detonation.

15. A Demining Team from the Eritrean Defence Force had manually checked the track in an operation on the morning of the incident, from 0545hrs to 0745hrs. This checking was as a result of a request from [Demining group] on the evening before the incident. The EDF had checked this same route in September 2000 when they took over the area from withdrawing Ethiopian forces, and once more prior to the also on approximately 26 January 2001. accident.

16. Five other landmine incidents have occurred in the area during the last six months and these are recorded on the briefing map at the local UNMO Team Site. Details provided by the local UNMO Team Commander are shown at Annex C. The majority of these incidents have resulted in injuries to livestock.

17. Photographs of the area are shown at Annex D. [One is reproduced below.]



PRIORITY OF TASK

18. The priority for this task was established directly by the in-country regional Project Manager of [Demining group], as part of their contract with the US Department of State for survey operations in the TSZ. No priority had been set for any mine clearance activities on the area.

[Demining group] state that priority of this task was also driven by the fact that local armed forces are scheduled to depart the area by 26 February and it is therefore anticipated that no EDF guides, deminers or Liaison Officers will be available in Omhajer region after that date.

SITE LAYOUT AND MARKING

19. A map of the area of the incident is attached at Annex E.
20. Because this was not an operational demining task site, there was no marking of any kind on the area.
21. The extent and perimeters of minefields in the area are unknown; this is partly because no minefield records have been made available of this area and partly because no minefield survey has been completed in the area. Part of [Demining group]'s task on the day of the incident was to define the approximate boundaries of mined areas.
22. Because the road where the incident occurred is not surfaced, the edges of the road are not specifically defined and it is likely that the line of the road moves from season to season.

SUPERVISION AND DISCIPLINE ON SITE

23. [Demining group] deploys their teams as two-man units, it is stated that a driver and a translator normally supports them but there is no written SOP to support this. An EDF Liaison Officer and EDF Demining Engineers also accompanied the Survey Team on this and other occasions.
24. One surveyor in the team is in charge of the task and as such is responsible for discipline and supervision of other team members. A request was made to [Demining group] Eritrea for a copy of their Survey SOPs, and one single page was provided to the UNMEE MACC in response to this request. No written SOP supports anything that occurs in the field and daily routines, procedures and methods of operation seem to be regulated verbally.
25. The teams are largely independent and their work is driven by instructions originated at [Demining group]'s Asmara office. The teams' work schedules are not submitted to any agency outside [Demining group].
26. After a survey of an area, [Demining group] Survey Teams routinely complete standard a combined [Demining group]/IMSMA report format reports of the survey. These are filed at [Demining group] Asmara and a copy is provided to UNMEE MACC for entry into the UN IMSMA database and archived at the MACC.
26. It is not known whether any other type of reporting is required or provided.

QUALITY ASSURANCE

27. [Demining group] do not operate under any SOP known to UNMEE MACC, so it is not known how quality of work is regulated or whether there is any formal regime of supervision or inspection for the work of [Demining group]'s Survey Teams, the quality of their work is regulated by... it is unknown to the MACC how the quality of the work is regulated.
28. [Demining group] Project Manager from Asmara or his deputy visit the Survey Teams in the field on a regular basis, approximately once each week. Further visits are sometimes carried out for training reasons or major tasking schedule changes or as part of EOD tasks implemented as a result of reports from the Survey Teams.
29. A request to [Demining group] Asmara for a copy of [Demining group]'s Survey SOP elicited a document consisting of one single page, entitled 'Succinct Survey SOPs' and reported by [Demining group] to be 'as used in Kosovo'.

COMMUNICATIONS

30. [Demining group]'s radio communications plan for this survey task was based on HF radios. The Survey Teams' vehicles are each fitted with an HF radio as part of their routine equipment. On the day of the incident [The Victim] used his vehicle radio to inform [Demining group]'s Asmara office about the incident. At the same time, assistance was requested over the HF radio to the UNMO Team at Omhajer, four kilometres from the site of the incident.
31. The UNMO Team at Omhajer man a twenty-four hour operations room equipped with a HF Base Station, VHF Base Station with a VHF repeater on the roof and a satellite telephone.

In addition, each of the UNMO vehicles is fitted with vehicle-mounted HF and VHF radios. Each UNMO team member is also equipped with a personal, hand-held VHF radio. No V-Sat telephone line is available at this time, but it is reported that this is planned for the future.

32. The UNMO Team Commander provided copies of daily reports and radio logs for the day of the incident to the Board of Inquiry team.

33. There is also a UN Jordanian company base at Omhajer, situated approximately 100 metres from the UNMO Team Site. An HF radio on a table in the men's sleeping quarters is manned twenty-four hours a day at this location, but there is no operations room. Each of the company vehicles is also fitted with VHF radios.

34. The daily operations report for the Company was a hand written page and this was shown to the Board of Inquiry team. The Company Commander promised a photocopy would be handed to the team, but no copy was provided.

35. No system of radio checks between the [Demining group] vehicles and the local UNMO or UNPK units was initiated or planned.

It is possible that the VHF repeater at the Omhajer UNMO Team site may have afforded reliable communication between the [Demining group] team and the UNMO team site. This could have supported any assistance required to the [Demining group] team from the UNMO team in Omhajer. Although [Demining group] has VHF handheld radios, they were not present with the team in Omhajer. The repeater at the Omhajer UNMO Team site may have afforded reliable communication between the [Demining group] team and the UNMO team site. This could have aided in any assistance required to the [Demining group] team from the UNMO team in Omhajer.

MEDICAL

36. No serious injuries were sustained as a result of the mine incident. Team Leader, [the Victim] had bleeding from his ears and treatment was provided to him from the doctor at the Jordanian Company base at Omhajer. [The Victim] was later brought to Asmara in a UNMEE helicopter and was subsequently examined and treated at the Jordanian Level II hospital.

37. [Demining group] Survey Teams routinely carry first aid and medical equipment as part of their vehicle kit and a trauma kit was available in this case. No qualified medic (other than [name removed] said to be a paramedic) was on the site but all [Demining group] personnel are trained in first aid. [Demining group] is currently implementing a medic's course and this will provide the requisite qualified personnel to join Survey Teams soon.

38. No casualty evacuation plan was in place with the [Demining group] Survey Teams on the day of the incident. The nearest hospital in Eritrea is at Guluji, approximately forty minutes driving time from the scene of the incident. There is also a hospital in Humera, Ethiopia, approximately fifteen minutes driving time, but use of this facility is not guaranteed.

39. The [Demining group] Team relied on support from UNMEE in the event of a serious accident to their team but had not coordinated this on the day of the incident. They expected that a UNMEE helicopter would be provided to give assistance to any casualty evacuation from the area.

PERSONALITIES INVOLVED

40. Personnel directly involved in the incident were five persons travelling together in an armoured Land Rover as part of a minefield Survey Team from [Demining group] Asmara, as detailed below.

- a. [Demining group] Team Leader [the Victim] Vehicle driver.
- b. EDF demining NCO [name removed] Right Front seat passenger.
- c. [Demining group] Translator [name removed] Left back seat passenger.
- d. EDF Liaison Officer to UNMO [Name removed] Centre back seat passenger.

e. EDF demining NCO [Name removed] Right back seat passenger.

41. A second Land Rover carrying five other personnel, uninvolved in the landmine detonation was following approximately twenty-five metres behind the damaged vehicle.

42. Written statements from all members of the Survey Teams are shown at Annex F.

EQUIPMENT AND TOOLS

43. [Demining group] Land Rovers are comprehensively equipped with demining tools and equipment to sustain their operation in the field. In this case, no demining operations were being carried out and so all tools and equipment remained in the vehicle.

44. After the landmine detonated, all personnel were accounted for and then all tools and equipment were removed from the damaged vehicle to be re-loaded onto the second vehicle.

45. The Eritrean Armed Defence Forces demining detachment at Omhajer who cleared the track on the day of the incident are equipped with one Schiebel AN-19/2 metal detector between thirty-five personnel. This machine was not used during the track clearance. The track was cleared using lengths of 10mm diameter reinforcing rod used as prodders, each approximately one metre long, sharpened to a blunt point at one end and bent over in a crook at the other end to assist in carrying and deployment.

DETAILS OF MINE INVOLVED

46. It was not possible to positively confirm the type of mine involved in this incident during the course of the Board of Inquiry's investigation because the clearance of ground necessary to view the crater and immediate area was hampered by the danger posed by the threat of other mines in the area. Although the Board of Inquiry Team did not visit the point of detonation, it is assessed that the mine involved in this incident was a probably an Anti Tank blast mine. This assessment is made because of the amount of damage sustained by the Land Rover and because of the size of the crater left behind.

47. The effects of the detonation caused the Land Rover to be thrown around, away from the original direction of travel. See photographs at Annex D.

48. It is unknown whether any records exist from Eritrea or Ethiopia about landmines laid in this area, but in view of the proximity of EDF EAF trench lines, it is likely that landmines were laid in the area to protect local defensive positions. This possibility is supported by the history of land mine incidents in the area, as shown at Annex C.

49. UNMO Team Site Commander at Omhajer states that it is known that landmines are laid on the north side of the River Tekeze and in front of defensive positions formerly occupied by Ethiopian forces in the area where the [Demining group] Survey was to take place.

50. There is considerable evidence that the area is mined; five incidents have occurred in the area since September 2000, as shown on the map at Annex E. Advice routinely given by the Omhajer UNMO Team is that travelling in this area is not recommended due to the threat of landmines.

51. [Demining group] Survey Team members state that local people had informed them that farm tractors use the unsurfaced track approximately once each week. EDF personnel also state that a farm tractor had travelled down the track on the day before the incident, prior to [Demining group] travelling there on the day of the incident.

52. The Jordanian Company at Omhajer report that, due to the threat of landmines, they do not travel in the area where this detonation took place.

EVIDENCE OF RE-MINING

53. Although there was no direct evidence or suspicion of re-mining at any part of this area, local Eritrean Defence Force personnel claim that the mine could have been laid during the

interval between the [Demining group]'s first transit of the road, towards their survey task, and the second, on their return journey. No reasons were put forward to support this theory, except for a general suspicion of enemy activity in the area, based on recent security incidents in south west Gash Barka region, as reported by UNMO Team Omhajer and shown at Annex C to this report.

54. There are no known controversial returnees to the area but the ethnicity of the area is disputed by trans border extremists and Islamic groups.

DRESS & PERSONAL PROTECTIVE EQUIPMENT

55. The Land Rover involved in this incident was armoured to a custom design by a specialist company in UK. The armour is designed to withstand the detonation of anti tank mine beneath the vehicle.

56. The vehicle is a diesel engine, five-door 'safari' type Land Rover, designed to carry five passengers. The vehicle was fully laden including being fitted with a roof rack, which was also carrying equipment and stores.

57. Members of the team who were questioned on the subject stated that they were wearing their seatbelts at the time of detonation. [Demining group] has a system of fines for employees who do not use their seatbelts while travelling in [Demining group] vehicles.

Sufficient Personal Protective Equipment is carried in each [Demining group] Survey vehicle to provide for all Survey Team members.

DETAILED ACCOUNT OF ACTIVITIES ON DAY OF INCIDENT

58. The following account summarises the responses to questions by members of the Board, directed to personnel involved in the incident and to managers and supervisors at [Demining group] Asmara.

59. The [Demining group] Survey team's visit to the Omhajer region was pre-planned as part of their weekly work schedule. The team arrived in the area at about 1600hrs on the day before the incident, after having driven from Barentu, via the UNHCR at Tesseney, total journey time from Barentu was approximately five-and-a-half hour's drive, including rest stops.

60. They received a briefing from the UNMO Team at Omhajer, where the UNMO Team deputy commander used a briefing map to point out the sites of previous landmine incidents to the [Demining group] Team. UNMO Team Commander also reports that [Demining group] were informed that travel along un-cleared roads and tracks in the sector was inadvisable until after 0900hrs each morning, but that the UNMO Team have no authority to prevent NGOs travelling where and when they want. [Demining group] were advised to speak also to the local EDF demining detachment, situated approximately two kilometres away from the UNMO Team Site.

61. [Demining group] report that receipt of the information on recent incidents in the area from the UNMOs made them realise that they would have to be particularly careful during their survey operations on the next day, because they would be travelling within the vicinity of recent landmine incidents. The Team had assessed that they would be approximately 700 metres away from the nearest front line trenches and therefore deduced that they would be outside any local protective minefields.

62. An arrangement was made to visit the camp of the local EDF demining detachment at Omhajer on that afternoon. It was agreed at the meeting that [name removed] would arrange for his demining troops to clear the track that [Demining group] would be travelling on during the early morning next day. In the event, either eight or nine soldiers from the EDF Demining Team carried out this task between approximately 0545 and 0745hrs.

63. After the meeting with EDF engineers, the [Demining group] team returned to the UNMO Team Site at Omhajer and then stood down until the next day.

64. On the day of the incident, [name removed] and his deputy, [name removed] were collected by [Demining group] from the EDF Demining Team camp and driven to the UNMO Team Site to join the [Demining group] Survey Team. Preparations were made for the day's activities and the team departed the area at some time between 0815hrs and 0830hrs.

65. When the team departed the area they were in possession of the HF frequencies, call signs and selective call numbers of the UNMO Team site. However, the [Demining group] Survey Team did not provide similar information about their communications to the UNMO team.

66. Both [Demining group] Survey Teams and the EDF NCOs, accompanied by the EDF Liaison Officer drove together in the two Land Rovers, north out of Omhajer. After approximately two kilometres they turned left off the road onto the unsurfaced track towards the area of the former Ethiopian front lines, a known mined area.

67. While the Survey Team were travelling along the unsurfaced track towards the area of their Survey Task, they saw the local EDF Demining Team, at approximately five kilometres from the main Omhajer to Guluj road, who by this time had finished their clearance of the track.

68. The Survey Teams drove along the track in convoy for approximately five kilometres. They then disembarked their vehicles; the surveyors carried out some compass and GPS resections over the area and made assessments on the local landmine threat.

69. All personnel re-boarded the Land Rovers and the vehicles were turned around, to drive back in the direction to where they had started. After approximately one kilometre, the vehicles were again stopped and further survey activities were carried out.

70. After this section of survey had been completed, the teams once again boarded their vehicles and began to drive back further towards the main road and Omhajer.

71. The vehicles were travelling southeast along the unsurfaced track, at a speed of approximately twenty-five kilometres per hour. The lead vehicle was approximately twenty-five metres in front of the following vehicle; this estimation was taken from the [Demining group] commander of the second vehicle [name removed]. After driving for approximately five minutes, the leading vehicle drove over an anti tank mine, causing the front end of the Land Rover to become severely damaged.



ACTIONS TAKEN AFTER THE DETONATION

72. After the landmine had detonated, both vehicles came to a halt. The occupants of the second vehicle immediately went to the aid of the first vehicle. Once the safety of all occupants had been ascertained, it was quickly realised that more landmines could be present on the area and so the two teams together began a methodical clearing of the area in order that they might move about sufficiently to assist in the recovery of personnel and equipment from the incident site.

73. While this was happening, a radio message was sent to UNMO team site at Omhajer, to request assistance. UNMO duty officer at the UNMO team site reports that HF communications reception was not good and the only message received was a request for an armoured vehicle to assist in the recovery of a [Demining group] vehicle.

74. Duty Officer further states that he walked over to the Jordanian company at Omhajer to relay [Demining group]'s request for an armoured vehicle and that the Jordanian response was in the negative. Although no timings are shown, this version of events is supported by information shown in the INMARSAT and telephone log sheets produced by the UNMOs. (Telephone and INMARSAT log sheets are used as radio and operational logs at the Omhajer UNMO Team Site).

75. The Jordanian Duty Officer on that day was Capt [name removed]. [Capt name removed] states that no such request was received from the UNMOs. A handwritten page was shown to the Board of Inquiry team, but no operations or radio log was produced by the Jordanian Company to show what occurred on the day in question.

76. [Demining group] Survey Team members used metal detectors to sweep a path to the stricken vehicle, this was marked with plastic mine markers and all equipment and personnel were transferred into the remaining Land Rover.

77. A safe path was cleared down the unsurfaced road in the intended direction of travel and towards Omhajer.

EXTERNAL ACTIONS BY SUPPORTING AGENCIES

Immediately after the incident, the Survey Team contacted [Demining group] Asmara and made a report about what had happened. At the same time they called the UNMO Team Site at Omhajer and requested that UNMOs arrange assistance from JORBAT Company in Omhajer.

Direct radio communications between the [Demining group] Survey Team and the UNMO Team site were then lost and the UNMOs were unaware that [Demining group] had been involved in a mine incident.

Approximately one hour after the incident, [Demining group] Project Manager went to the UNPK Force HQ JOC in Asmara and an arrangement was made through JORBAT Headquarters at Barentu for an APC and a Doctor to be despatched from the JORBAT Company at Omhajer to go to meet the [Demining group] Survey Team on their way back from the incident site.

The APC and crew departed Omhajer accompanied by an UNMO vehicle, and patrolled the main road for approximately two hours, but did not meet the [Demining group] Survey Team and it is assumed that they missed each other due to both passing the road junction at different times.

[Demining group] national staff members state that approximately fifteen minutes after the incident, ten or twenty EDF soldiers arrived at the scene.

CONFIRMATION OF INSURANCE

78. [Demining group] Asmara state that all of the staff members involved in this incident are insured by Lloyds of London in accordance with Eritrean national requirements.

SUMMARY

79. These [Demining group] Trust Survey Team personnel were travelling over an area of ground that they believed was not mined, within an area that was suspected as mined. The team was defining mined areas through the use of map, compass and GPS by visiting areas of suspect ground as part of a process of assessment to decide whether the area warranted the deployment of mine clearance teams. Mines had been found on adjacent areas. The team considered that the ground where the detonation occurred was an area with no obvious risk

because it was in use by the local community and had been cleared by the EDF demining Team. The [Demining group] Survey Team had information to suggest that the entire area was very dangerous but were reassured that the track was safe because of the EDF mine Clearance Team's work on the morning of the incident. The team was tasked directly by [Demining group] Asmara, without coordination from UNMEE MACC. Minor injuries sustained by one person led to bleeding from his ears. No further significant injuries were sustained.

CONCLUSIONS

80. On the day of the incident [Demining group]'s Survey Teams were carrying out independent minefield Survey duties. The source of tasking for surveys in the Omhajer region is not clear.

81. The teams had informally and tacitly assessed the area of ground that the teams were working over at the time of the incident as of no obvious risk.

82. Priority and sequence of tasking for this survey deployment in Omhajer region is unclear.

83. Radio communications in the local area were insufficient and could have been improved. This could have been simply by establishing communication with a routine radio check before departing the UNMO team site, or an alternate means of communication established.

84. [Demining group] survey SOP is insufficient and not accredited by UNMEE MACC.

85. Although members of both Survey Teams are experienced and trained in first aid, there was no qualified or specifically appointed medic with either team. Medical care after a landmine incident should depend on the training of a qualified medic, not on the individual skills of team members.

86. No formal plan for the evacuation of landmine casualties was prepared; but the team relied on helicopter evacuation from UNMEE in the event of an accident to their team, but had not coordinated this locally prior to starting their survey operation.

87. Although [Demining group] is supported by UNMEE with the use of helicopters, information briefings, provision of information, and administrative and general support, this does not provide UNMEE with any measure of influence over [Demining group] activities in the TSZ and [Demining group] appear to do whatever they wish, with reference to UNMEE only when they want support.

88. It was not possible to confirm the type of anti tank mine involved in this incident.

89. There is no substantive evidence of re-mining being a factor in this incident.

Although no one was seriously injured in this incident, this was largely due to the fact that the personnel involved were travelling in an armoured vehicle. It is possible that more research and more planning, coupled with a systematic analysis and use of local information could have avoided this accident.

RECOMMENDATIONS

90. Although no one was seriously injured in this incident, this was largely due to the fact that the personnel involved were travelling in an armoured vehicle. It is possible that more research and more planning, coupled with a systematic analysis and use of local information could have avoided this accident.

91. Although it is accepted that the risk of travelling on the unsurfaced track was reduced by the deployment of EDF demining personnel on the morning of the incident, less reliance should be placed on the results of demining personnel who have not been trained to a standard compatible the UN International Mine Action Standards.

92. Personnel deployed on minefield survey operations should not travel off known clear areas.

93. When teams are deployed to carry out minefield surveys in the TSZ and adjacent areas, it should be as part of a planned tasking through UNMEE MACC. Tasking and coordination of

all mine survey operations in the TSZ and adjacent areas should be implemented in coordination with the UNMEE MACC.

94. In order to ensure that all known information is made available to Survey teams, Minefield Surveys in the TSZ and adjacent areas should be coordinated in cooperation with the Mine Action Coordination Centre. Complete reliance should not be placed on single-source or unconfirmed information.

95. Organisations and personnel deployed to carry out minefield surveys should work in accordance with their own SOPs, which should be accredited by UNMEE MACC before they are implemented. No further [Demining group] operations within the TSZ and adjacent areas will be authorised until UNMEE MACC have assessed [Demining group] SOPs as acceptable.

96. A formal plan for casualty evacuation should be carried in every Survey vehicle. This should include the location and route to the nearest appropriate hospital facility.

97. In some areas of the TSZ, it will be necessary for vehicles to travel together in pairs. This directive should apply to all agencies, not only mine Survey Teams.

98. Radio communications between [Demining group] vehicles and the nearest UNMO and UNPK units should be improved. This could initially be achieved by simply exchanging call signs and frequencies.

99. A formalised weekly work plan for operations inside the TSZ and adjacent areas should be provided in advance every week from [Demining group] Asmara to the UNMEE MACC.

100. This accident could have been avoided if a system of route clearances were established across the TSZ and adjacent areas. It is recommended that a study be made on what options are available to check roads and tracks for landmine on a structured, routine basis.

101. The unsurfaced track should be flailed and UNMEE should provide assistance to recover the damaged vehicle.

Signed: Chief of Operations, UNMEE MAC; Chief of Information, UNMEE MAC.

[Annexes are held on file.]

Distribution: HQ UNMEE, MACC, Commissioner for Coordination with UNMEE; UNMAS, [Demining Group] Scotland, US Embassy Asmara, [Demining group] Asmara.

Victim Report

Victim number: 573	Name: [Name removed]
Age: Not recorded	Gender: Male
Status: Supervisory	
Compensation: Not made available	Time to hospital: Not recorded
Protection issued: none	Protection used: none

Summary of injuries:

Minor ears

No medical report was made available.

Related papers

INITIAL REPORT OF LANDMINE INCIDENT

1. The following is the text of an e-mail sent to UNMEE MACC on 20 February at 1136hrs.

From: [Demining group]

Sent: 20 February 2001 11:36

Subject: Tank mine strike

At 10:30hrs 20/2/01 an armoured [Demining group] Land Rover struck an anti-tank mine on a dirt track 4 kilometre north-west of Omhajer. There were no casualties. The track had been checked by EDF engineers that morning, and had previously been used by [Demining group]. The vehicle is being recovered by the Jordanian contingent using an APC. I have tried calling your office but no-one is answering the telephone.

Signed.

2. The e-mail was not received at MACC and [Demining group] Asmara sent the same message by Fax at 13:48hrs.

Response to complaint by the demining group involved

[Demining group] COORDINATION AND COOPERATION WITH UNMEE MACC

Acknowledgement is made of [Demining group] response to UNMEE MACC Board of Inquiry report on [Demining group]'s landmine accident in Eritrea.

It would seem that [Demining group] continue to remain arrogant, sanctimonious and uncooperative. With this in mind, there seems to be little point in providing a further response, except to say that every point in the UNMEE MACC Board of Inquiry report remains as originally published.

Draft versions of MACC reports about landmine incidents are not provided to organisations or individuals outside the investigation team. This system will continue.

It is remarkable that, although [Demining group] Asmara have recently sustained an accident that cost a great deal of money and the potential for loss of life and limb of its own employees, no known actions have been taken to assist in the prevention of future such events.

You are referred to page 2 of the Guide for the application of UN International Mine Action Standards. The final paragraph in Section four informs that IMAS are not SOPs and do not define the way in which mine action standards are to be achieved in the field. [Demining group] SOPs are insufficient and the UNMEE MACC recommends that [Demining group] address this insufficiency as a priority.

Part of the Quality Assurance effort by any organisation should be to document procedures and drills, for use by managers and in training as well as for general reference throughout the organisation. The reference documents of an organisation are what provide its continuing standards and are useful to outsiders and to new arrivals within the organisation.

It is interesting to note that in one part of [Demining group]'s response, it is stated that they will conform with IMAS, in another part of the document it is stated that IMAS is 'woolly' It

should be noted that IMAS is currently a draft document and not formally issued by the UN for use in the field or elsewhere.

UNMEE MACC intends to investigate future landmine incidents using the same procedures and standards as were used last time.

It is noted that [Demining group] Asmara continue to not report their activities within the TSZ and adjacent areas to UNMEE MACC on any regular basis or with any structured reporting format. The last report from [Demining group] to UNMEE MACC was on 16 February 2001.

[Demining group] visits to the MACC are generally infrequent, irregular, unannounced, and hurried. The MACC continues to hear about [Demining group] activities on their Netherlands contract, their US DoS contract, deminer and EOD training and general operations on a second-hand basis through conversations with other individuals and agencies, or from reports from other organisations. The working relationship between MACC and [Demining group] is virtually non-existent but [Demining group] continue to make paranoid comments about their perception of MACC's desire to command and control their operation.

From a MACC perspective, [Demining group] appears to be an organisation that does not want to be coordinated and no further attempt will be made by UNMEE MACC to coordinate [Demining group] activities.

Statements

WRITTEN STATEMENTS

Land mine accident

It was Tuesday morning when we (two experts, two interpreters, three Eritrean (EDF) surveyors, two local drivers and I (trainee) left Om-hajer driving two Land rover heading towards North west of the town. Our purpose is to make some marks on the field that we considered as a danger mine areas. We drove westward of the Tessenai Om-hajer road heading with small road and after we went four up to five kilometres the EDF surveyors told us to stop there for they did not survey the area beyond before i.e, it may be risk to drive. In that turning point ([two names removed]) take notes and measured the location and took photos of that area which was the Ethiopian trench in front of it full of anti personnel-mines. The focus point which we were 50 meters from the mines. After the experts finished their job we started to drive back to Om-hajer. The first car driven by (one of the expert)

And with it the three EDF and an interpreter. The second one drove by local driver and all the remaining members of that day. While we have driven around one kilometre back through the same road we had driven in the early morning, the first car blown out by land mine and heavily damaged its front part. [The Victim/driver] was damaged his ear especially while the others were Ok. Then [name removed] radioed to UN Jordanians in Om-hajer to come and help us but the did not come. Instead some 10-20 EDF men came and searched the area if some infiltrated armed men were in the place. After four hours we got out from the area and reached Om-hajer. Thus were in short about the accident.

Signed.

First, two teams of [Demining group] went to Om-hajer on Monday February 19th 2001. So after we checked where we staying we went to the EDF camp and talked two military engineers [names removed] about the trenches (old Ethiopian Points) about the safety to get in to them so they told us that the checked roads are Ok to drive on otherwise they are not, so we told them to talk us to the trenches through the safe road they agreed we made an appointment with them for the next morning at 7:30. So after [names removed] arrived we started driving. After driving for about six kilometres we got to the end of trenches and did some work there, on the way back through the same road at about 10:20 the vehicle I was on

drove over a mine. I can't tell whether it is AT or an AP mine. After making sure that every one is Ok we decided to check the road our self-using the detectors and also the EDF engineers helped us on that one but no one else. Actually we asked the UNMOS and the UNMEE to help us but they were not there, we were there for four hours but they did not come. They told us later that they went through another road. Finally we got to the UNMOS on our own when they started to reason out their position.

Signed: Interpreter

We left Om-hajer on 20-02-2001 at 8:00 in the morning. I was forced to leave my car and gave to [name removed] because the deminers who were travelling with us crowded the car. I went to the other car. We crossed the road peacefully and did our work for one and half hours. And then we turned back through the same road, suddenly the accident happened to the first car. When the accident happened we tried to contact the UN peacekeeping force but nobody helps us. At last we turned back to Om-hajer with our efforts.

Signed: Local driver.

23-02-2001

We departed from Asmara on 18-12-2001 and moved towards Keren. We intended to spend the night at Barentu but we were told that our destination is Om-hajer and it's surrounding. According to our instruction we departed from Om-hajer on the 20-02-2001 at 8:30 p.m. [Three names removed] and myself were in the 2nd car and we were following the car that was being driven by [the victim] that also contained [name removed] and three other EDF deminers. And finally we reached our destination. At the spot after getting adequate information from EDF deminers we started to come back through the same road. All of a sudden we saw the car which was in-front and was being driven by [the victim] was damaged by land mine . After this we were told by [name removed] not to come down of the car and not to move anywhere. After some minute we saw the people coming out safely from the car that was damaged by the mine and we were happy. Even though [the victim] had got minor injuries we were happy that he was alive. After 15 minutes EDF soldiers came to our rescue.

It was reported to Asmara by radio that we had an accident. [The victim] also called for help to nearby UN posts but nobody came. Then we turned back to Om-hajer to the UN camp packed up in the remaining car.

Signed.

Analysis

The primary cause of this incident is listed as "*Unavoidable*" because it seems that the group had taken pains to ensure that the area they were in had been checked before they drove there. The secondary cause is listed as a "*Management control inadequacy*" because the demining group's senior managers failed to ensure that communications were established and failed to provide their staff with detailed SOPs. It seems that their field staff were inadequately trained because they did not realise the need to have communications, medics, evacuation plans or SOPs.