

DDAS Accident Report

Accident details

Report date: 15/03/2004	Accident number: 262
Accident time: 13:25	Accident Date: 30/10/1999
Where it occurred: MNB South, Nr Ljubance	Country: Kosovo
Primary cause: Unavoidable (?)	Secondary cause: Victim inattention (?)
Class: Victim inattention	Date of main report: 11/12/1999
ID original source: KC/MD/JF	Name of source: KMACC
Organisation: Name removed	Ground condition: leaf litter route/path
Mine/device: PMA-2 AP blast	Date last modified: 03/03/2004
Date record created: 18/02/2004	No of documents: 2
No of victims: 1	

Map details

Longitude:	Latitude:
Alt. coord. system: GR: DM 932 967	Coordinates fixed by:
Map east:	Map north:
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

inadequate communications (?)
metal-detector not used (?)

Accident report

An accident report was compiled for the country MACC and made available in January 2000. The following summarises its content.

The group involved in the accident was a collaboration between two demining companies, with the SOPs of one group only being used. These involved the use of two-man teams in a one-man clearance drill.

The accident occurred on a trail used as access to a village. Two accidents had occurred in the previous month [not recorded whether civilian or livestock] and the area had been given a high priority.

The demining team of seven (including one "doctor" and a supervisor) deployed at the site at 08:10 and worked all morning. Mines found at the site were PMR2A "usually secured" by a PMA-2.

After lunch four of the deminers were tasked to build a bridge over a creek to allow better access to the area being cleared. The remaining deminer and the supervisor cleared a one metre wide lane in order to examine a tripwire that had been spotted outside the working area. When they got close to the tripwire the supervisor took over clearance and worked for 20 minutes. Then he "stood up, turned around and requested two more small pickets to mark his lane". While doing this he "lost his footing" and took a step backwards over his base stick with his right foot, which initiated a mine. This occurred at 13:25.

Photographs of the site showed the victim's torn boot at the accident site. The victim's injuries were described as "right foot and minor injuries on left leg from blast", later expanded with the blast "took the heel of the right foot". The foot was subsequently amputated.

The victim then "jumped on his left foot to the two metres safe lane where his number two deminer met him. He then reported himself to the Doctor on site".

Helicopter Medevac from a landing site was immediately requested and the victim stabilised and prepared for the road journey to the helicopter landing site. All communications were by sat-phone. The victim left for the helicopter at 13:45 and arrived at 14:00. The helicopter arrived at 14:15 and landed at the medical facility at 14:50.

The MAC investigators arrived at the site on the following day and were met by representatives of the clearance groups who provided a clearance team for the investigation. The area around the accident was cleared in order to allow better access to the investigators. This took three hours. During the clearance a "second PMA-2" was found within about a metre of the blast site [not measured but the distance is my estimation from a photograph]. The mine was found with a detector, and there was some doubt over whether the victim had been using a detector or prodding just prior to the accident.

The use of PMA-2 blast mines to protect the tripwires of fragmentation mines was well known and anticipated.

The investigators found that the victim had worked for the demining group for three years and had a further four year's relevant experience with the Bosnian army. The protective equipment he was wearing was a helmet and visor and a fragmentation vest. His boots were described as "normal working half boots".

Conclusion

The investigators concluded that the victim was experienced and working properly in accordance with the relevant SOPs. They recorded that the sat-phone was the only means of communication on the site. They added that the accident was "preventable".

Recommendations

The investigators recommended that "VHF communications" be established "as soon as possible", that the contracted partner in the clearance coalition must clarify with the MAC which group's SOPs were to be used, that refresher courses on drills (especially tripwire) must be carried out, and that the use of the detector whenever possible must be stressed.

Victim Report

Victim number: 336	Name: Name removed
Age:	Gender: Male
Status: supervisory	Fit for work: yes
Compensation: not made available	Time to hospital: 1 hour 25 minutes
Protection issued: Frag jacket Helmet Short visor	Protection used: Frag jacket, Helmet, Short visor

Summary of injuries:

INJURIES

minor Leg

AMPUTATION/LOSS

Leg Below knee

COMMENT

No Medical report was made available.

Analysis

The primary cause of this accident is listed as "*Unavoidable*" because the victim appears to have been working in an approved way and simply lost his balance. Despite the fact that the MACC investigators considered this "avoidable", it is presumed that such examples of human-error are essentially unavoidable throughout the accidents in this database. The secondary cause is listed as "*Victim inattention*".

There was some confusion over which of the two demining group's SOPs were to be used, and whether the victim was using a detector prior to the accident. (There is some disagreement within the industry over the best way to search for minimum metal mines - thorough excavation or detection.) However, the accident occurred ahead of his base stick in an area that had not been searched, so it seems unlikely that these concerns reflect on the cause of the accident.

The failure to have adequate on-site communication in place may be seen as a serious management failing and was highlighted in the investigation.

The report demonstrates an unusually thorough and critical approach to accident investigation. The Mine Action Co-ordination Centre which carried out the investigation was not engaged in demining, and this may (in part) explain the unusually objective nature of the investigation.

Related papers

The Accident report included pictures of the accident site which showed the victim's boot and others showing the second PMA-2 less than a meter to the left of the small crater caused by the first mine. (The second mine was found using one of the detectors used at the site.)

The photograph below shows the second mine and the shallow "crater" (top right) of the first mine.



The victim's protective equipment was also photographed. The visor appeared lightly scratched but this did not appear to have occurred in the accident. The victim's undamaged base-stick was also shown.

In a summary on mine/UXO accidents in Kosovo, (undated but covering September 1999 - August 2000), it was stated that this accident "could definitely have been prevented". The summary included "Lessons learned" and listed:

- 1) "Refresher on all clearance drills especially the tripwire drill procedure will have to be conducted. A particular attention to clearance on sloping ground must be given."
- 2) "The metal detector must be used when there is no soil contamination."
- 3) "Sub-contracted company must comply with the approved SOP from the MACC."
- 4) "A radio communication network must be established as soon as a Mine Action Programme is initiated."

In December 2001 the MACC reported that the Victim had recovered, got a prosthetic and was then working in Tuzla, Bosnia.