DDAS Accident Report

Accident details

Report date:	15/03/2004	**Accident number:**	254
Accident time:	11:30	**Accident Date:**	06/11/1999
Where it occurred:	Dubnica, Selo, Vucitern	**Country:**	Kosovo
Primary cause:	Field control inadequacy (?)	**Secondary cause:**	Inadequate equipment (?)
Class:	Missed-mine accident	**Date of main report:**	29/11/1999
ID original source:	MD/JF	**Name of source:**	KMACC
Organisation:	Name removed		
Mine/device:	PMA-2 AP blast	**Ground condition:**	agricultural (abandoned) leaf litter trees
Date record created:	18/02/2004	**Date last modified:**	18/02/2004
No of victims:	1	**No of documents:**	2

Map details

Longitude:	21° 03' 13" E	**Latitude:**	42° 46' 56" N
Alt. coord. system:	UTM	**Coordinates fixed by:**	GPS
Map east:	0440	**Map north:**	36687
Map scale:	PODUJEVO	**Map series:**	KFROMisc 014
Map edition:	1	**Map sheet:**	3280IV
Map name:	1:50,000		

Accident Notes

inadequate communications (?)

partner's failure to "control" (?)

squatting/kneeling to excavate (?)

visor not worn or worn raised (?)

Accident report

Details of this accident were made available in an area MACC accident report in January 2000. The following summarises its content.

The accident occurred in a "VJ laid minefield" marked by KFOR in July/August 1999. KFR engineers had removed some mines and a demining NGO had removed some more before moving to higher profile tasks. On the day of the accident, the demining teams were preparing "boxes for later verification by Explosive Detecting Dogs (EDD)". Most of the site was being prepared for EDD clearance.

The boxes were being prepared by deminers in two-man teams using a one-man drill. They worked for thirty minutes, then rested for thirty minutes. The victim had been trained by another demining group before and had received a five day refresher course when starting with his current employer. Work began that day at 08:00.

The photograph below shows the end of the lane and the blast crater along with part of the victim’s boot.

The victim was working in an area of low brush adjacent to a (then) disused farm vehicle track. He was clearing a working lane along a line of PMA-2 mines and his team had found two that morning (one found by the victim). At 11:30 he initiated a PMA-2 by stepping on the mine with his right foot.

The victim himself had no memory of what happened in the accident, saying that he remembering doing detector and prodding drill "then I was on the stretcher having the team medic take care of me".

His injuries were recorded as "Right foot and minor injuries on left leg, facial and both hands from blast". It was added that he had "unknown level of eyesight damage".

The investigators determined that his injuries indicated that he could not have been in an upright position when the accident occurred. The "front part" of his prodder was missing and was not found. They decided he was probably moving forward and bending to prod when the accident occurred.

The victim was treated on site within two minutes and stabilised. He was evacuated to a KFOR First Aid Station. He was then moved to a military surgical facility and arrived within one hour and 45 minutes of the accident.

The demining group had established radio contact with the nearest KFOR base that morning but when they tried to report the accident they received no reply. It was later found that no one in the KFOR radio room at the time spoke English.

Following the accident the victim's detector was tested and metal found both behind his end of lane marker and in front of it. Another PMA-2 was found one meter "forward" of the accident crater.

It was recorded that the victim was wearing protective equipment and that it was effective [although his eyes were damaged].

Conclusion

The investigators concluded that the accident was preventable. They stated that he was "probably kneeling" at the time and then described a working position that was squatting. They thought it likely that he was prodding and observed that metal in the cleared area implied that he may have been "negligent" or had a "lapse of concentration" at the time.

Recommendations

The investigators recommended that deminers should be supervised more closely when in dense vegetation, adding that this might mean using the deminer's partner "to observe and comment". They further recommended that "every effort must be utilised to convince KFOR" to provide the MACC with details of all tasks that have been conducted. Finally they stressed that radio communication must be established whenever "any Mine Action Programme is initiated".

Victim Report

Victim number:	328	**Name:**	**Name removed**
Age:	39	**Gender:**	Male
Status:	deminer	**Fit for work:**	yes
Compensation:	not made available	**Time to hospital:**	1 hour 30 minutes
Protection issued:	Frag jacket Helmet Short visor	**Protection used:**	Frag jacket, Helmet

Summary of injuries:

INJURIES

minor Eye

minor Hands

minor Head

severe Eye

AMPUTATION/LOSS

Leg Below knee

COMMENT

See medical report.

Medical report

A medical section of the IMSMA Mine/UXO Incident/Accident report revealed that the victim was 39 years old and from Bosnia Herzegovina. The report was dated 6th November but recorded the accident as having occurred on 30th November. The victim's name was correct and was used as the identifying reference.

Computer drawings indicated that he suffered "loss of…Foot/Toes" and injuries to his "Upper limbs" and "Head/Neck". The Accident report indicated that he also suffered hand and eye injuries.

In a statement made by the victim on 13th November 1999 he was asked "How is your right eye today" and replied "…I can see but it is not clear".

In December 2001 the MACC reported that the Victim had been fitted with a “permanent” prosthesis and was then living in Bosnia and working as a Café owner.

Analysis

The primary cause of this accident is listed as a *"Field control inadequacy"* because the metal found in the area cleared by the victim (and his possibly raised visor) imply that he was not working properly and his errors were not corrected. (The metal was found on the surface – a cartridge case – and may have been seen and ignored by the victim.)The victim's own detector was used to check the area and locate another mine, so the detector appears to have been functioning correctly. The investigators recommended that supervision be tightened, which implies that they recognised that it was not adequate.

The investigators decided that the victim was not upright when the accident occurred. His broken prodder implies that the prodder was very close to the blast, which occurred beneath his foot. His hands were also in close proximity. This implies that the victim was crouching and prodding just in front of his feet. The fact that the victim suffered an eye injury implies that his visor was raised at the time. Although his frontal protection did not overlap the visor so some blast could have entered from beneath, it would have been very unlikely to strike an eye directly if the visor was down. The investigator's conclusion that the protection used was effective is rendered questionable by the fact that the victim's eyes were injured. The secondary cause is listed as *“Inadequate equipment”* because the Victim’s PPE was not adequate.

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 their investigations.

Related papers

An accompanying photograph showed a short body-armour jacket, a single ankle length military style boot, a helmet with visor, a long prodder, large bricklayer's trowel, shears, hammer and long-handled secateurs. The detector in the picture (reproduced below) appeared to be a Vallon.

A summary of recent accidents (undated but covering September - November 1999) stated that the victim trod on a PMA-2 when he stepped over his base stick.

A summary of mine/UXO accidents (undated but covering September 1999 - August 2000) in Kosovo stated that this accident "could have been prevented". KFOR was heavily criticised for failing to provide any details of its prior work in the area until after this accident had occurred. The summary included "Lessons learned" and listed:

1) "Closer supervision in dense vegetation areas should be enforced even if it means utilising the Number 2 deminer to observe and comment on the active deminer's actions."

2) "Every effort must be utilised to convince KFOR to provide the MACC with all the information in regard to mine/UXO clearance and/or disposal tasks that they have conducted. This information must be provided to the clearance organisation that is to conduct the clearance task in the relevant area."

Another "memo" dated 16th November 1999 accepted the possibility that the victim used his detector, walked back and put it down, then went forward again to investigate his reading and stepped too far forward. It also notes "the possibility of negligence and/or a lapse of concentration on the part of the deminer", mentioning the metal found behind his base stick as possible evidence of this.