5-21-1999

DDASaccident120

Database of Demining Accidents
DDAS

DDAS Accident Report

Accident details

Report date:	12/02/2004	**Accident number:**	120
Accident time:	not recorded	**Accident Date:**	21/05/1999
Where it occurred:	Plowshare minefield, Cordon Sanitaire, Mukumbura,	**Country:**	Zimbabwe
Primary cause:	Field control inadequacy (?)	**Secondary cause:**	Inadequate training (?)
Class:	Handling accident	**Date of main report:**	[No date recorded]
ID original source:	none	**Name of source:**	KMS
Organisation:	Name removed		
Mine/device:	R2M2 AP blast	**Ground condition:**	not recorded
Date record created:	12/02/2004	**Date last modified:**	12/02/2004
No of victims:	1	**No of documents:**	1

Map details

Longitude:		**Latitude:**	
Alt. coord. system:		**Coordinates fixed by:**	
Map east:		**Map north:**	
Map scale:	not recorded	**Map series:**	
Map edition:		**Map sheet:**	
Map name:			

Accident Notes

no independent investigation available (?)

inadequate communications (?)

inconsistent statements (?)

disciplinary action against victim (?)

protective equipment not worn (?)

inadequate training (?)

Accident report

An Internal Accident report was made available by the demining group in December 1999. There was no country MAC.

The accident occurred in the "Ploughshear" section of a minefield between Zimbabwe and Mozambique. Laid during the 1970s, the extensive minefield was last maintained in the early 1980s. Most mines are R2M2, VS50 and M969 blast mines. The demining group were clearing the area using two-man teams and a one man drill. They routinely “disarmed” all R2M2 mines by removing the booster charge.

The victim was the one of a two-man team and was supposed to be "controlling" his partner who was in the clearance lane. The victim claimed that he had noticed an object "that he did not recognise" and prodded it with a piece of wire when it exploded. He sustained "lacerations and some light fragment damage to his hands… deep lacerations and damage to his left thumb and forefinger and lighter lacerations to his right middle finger".

[From observation at the site, I infer that because the victim was observing he was not wearing a visor. It is very likely that he was not wearing his protective apron either.]

Medical Orderlies bandaged his wounds within five minutes and took the victim in the Team Ambulance to the Site Doctor within ten minutes. The victim's injuries were assessed as light and treated at the field medical facility where it was decided that he should go to hospital to reduce the risk of infection. The victim was taken to hospital in an ordinary vehicle so that the ambulance could stay on site and work continue (mines had still to be destroyed). The victim was accompanied by a driver and a "medical orderly" to Karanda hospital.

All work at the site was halted while the accident was dealt with.

The accident site was examined by the Team Leader who found a charred rock and some plastic fragments and a stone in the ground that "also had charring". The fragments were identified as parts of the "surrounds of the percussion cap" of an R2M2 mine.

[The detonator/percussion cap is set into clear plastic as shown in the picture above, which shows the entire metal content of the mine].

The investigator visited the victim in hospital later the same day and found that the victim’s wounds had been "sutured and dressed" and that the victim could return to camp the same day.

The investigator thought that the victim's story of prodding the unknown object with wire was "improbable". He stated that "the most likely cause is that he was holding the object between the thumb and forefinger of the left hand and struck the object with the right hand using the other stone found at the site which he held in an over hand grasp". [This may imply a lack of understanding on the part of the investigator because the detonator is not an “impact” type but a “stab-sensitive” type.]

The investigator reported that "radio traffic" was confusing at the later stages of the accident and ascribed the cause to sharing the "net" with another team that were still working.

The investigator, who was in charge of the site, also criticised his own failure to brief the remaining crew at the site thoroughly about the situation.

Conclusion

The investigator concluded that the accident "occurred outside the minefield" while the victim was supposed to have been "observing" his partner. Further, the device involved was an R2M2 booster and although deminers had been told to report all unfamiliar objects, he felt the device may have appeared "innocent" to the victim. He found the victim's version of events

"flawed" and did not accept it. He added that the vehicle taking the victim to hospital should have been in radio contact so that his progress could be relayed to those left behind.

Recommendations

The investigator recommended that the victim should be suspended without pay during convalescence and given a "category C written warning". He also recommended that the group's QA and the national Clearance authority should be asked to make further recommendations.

Victim Report

Victim number:	156	**Name:**	**Name removed**
Age:		**Gender:**	Male
Status:	deminer	**Fit for work:**	yes
Compensation:	not made available	**Time to hospital:**	not recorded
Protection issued:	Frontal apron Long visor	**Protection used:**	not recorded

Summary of injuries:

INJURIES

minor Hands

COMMENT

See medical report.

Medical report

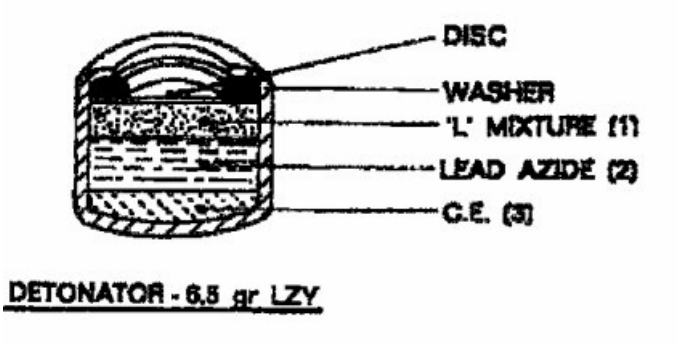
An internal report from the Project Medical Doctor was made available. This brief report stated that the victim "sustained lacerations bilateral hands (multiple)" and that "debridement and laceration suturing" had been done. He returned to the demining group's camp on the same day as the accident occurred.

Analysis

The primary cause of this accident is listed as *"Field control inadequacy"* because the victim was in breach of SOPs and his actions were not corrected by his supervisor. It seems likely that the victim did not recognise the detonator from the most common mine found at the site. These mines were routinely disarmed with their boosters removed. The detonator would not usually fall out, but may have in this case (alternatively it may have come from a broken mine or been thrown out a pit during demolition by burning). The victim's apparent ignorance of its appearance implies a training lack that would be a management failing. The investigator's ignorance of how it functioned was a further lack of training. The secondary cause is listed as *"Inadequate training"*.

The investigation was carried out by the Site Supervisor at the time, and it is unique for him to have included a criticism of his own actions, so demonstrating more objectivity than most. However, the punishment of the victim was unusual given that those responsible for ensuring that site discipline was effective were not criticised or held in any way responsible.

It is a further failing that the source of the detonator was not investigated, especially as it may have been thrown out of a burning pit when mines “popped-off” during demolition.



The picture above shows a cut-away drawing of the stab-sensitive detonator,. It is easily initiated by prodding it with any hard object, such as a piece of stick or wire.