

DDAS Accident Report

Accident details

Report date: 18/05/2006	Accident number: 276
Accident time: 12:50	Accident Date: 15/04/2000
Where it occurred: Cordon Sanitaire, Mozambique border	Country: Zimbabwe
Primary cause: Unavoidable (?)	Secondary cause: Unavoidable (?)
Class: Excavation accident	Date of main report: 15/04/2000
ID original source: J.Morrissey	Name of source: Mounser
Organisation: Name removed	
Mine/device: R2M2 AP blast	Ground condition: soft woodland (bush)
Date record created: 18/02/2004	Date last modified: 18/02/2004
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 investigation (?)
mechanical follow-up (?)

Accident report

A limited accident report was made available by the programme manager in January 2001. Documents of any kind were only provided after pressure had been applied through the funder. To try to counter any omissions in the reports provided, statements were taken from a field supervisor and the field Doctor in March 2001. The following summarises the content of the report provided and includes detail from statements.

At the time of this accident the demining company operated in one-man teams using a one-man drill [from the start of 2000 this drill was adopted]. In this a single deminer looks for

tripwires, cuts undergrowth, uses the detector and excavates finds. The group issued frontal protection and their drills assumed that the deminer would kneel or squat while excavating.

The report stated that at "12:50 on 15 April 2000, [the victim] detonated a mine whilst conducting clearance in the Cordon Sanitaire Minefield". When the casualty was recovered from the minefield and tended by the paramedic, it was found that he was conscious and had sustained only minor injuries." The victim arrived at the site medical unit at 13:05 and the field doctor arrived "immediately afterwards". The victim sustained superficial burns to his left "arm and forearm. A minor contusion also developed on his left wrist." [Apparently, he was not taken to a hospital.]

The internal investigators began a site-examination at 13:18. They found that the accident occurred within the first row of mines on the Zimbabwean side of the Cordon Sanitaire. The victim was working in a "boxed" area in which all mines on the first row had been found and destroyed for 22m. He was finishing the last three metres of the first row when the accident occurred.

The investigators recorded that marking was clearly visible and the vegetation removed. The ground had been prepared by a D6 (which pushed over trees) and a vegetation mulcher. The ground conditions were "good for demining" with a relatively level soft surface. Water had not been used on the detector reading under investigation at the time of the accident, although it had been used in areas cleared earlier.

The victim was wearing his PPE. His detector, adjusted correctly, was behind him. His prodger, with a hand-guard, was approximately two metres behind the accident site. His trowel was located slightly to the right of the crater. His visor was in the crater. There were blast marks on the visor. From the shape of the crater, the investigators concluded that the mine was buried and that the blast was directed away from the deminer. They found "no evidence of excavation".

The crater had a sharp leading edge, and the forward edge sloped away. The investigators thought that the angle of the ground, which sloped downward away from the victim, would create such a crater. The crater was recorded as being approximately 20cm in width and between 8 and 10 cm deep. The mine fragments found in the crater were from an R2M2 and it was noted that the other mines in the area had been M969s.

"Medical coverage was immediately available on site. A paramedic was in an ambulance... at the control point approximately 300m from the accident area. A qualified Medical Orderly was also located directly at the area where the accident occurred."

Conclusions

The investigators came to the following conclusions:

- a) The accident happened during prodding.
- b) Again a model R2M2 mine was involved in the accident. Prodding accidents so far mainly involve this mine model. It appears this was the only R2M2 among M969 mines.
- c) All marking was correct.
- d) All machines had been calibrated correctly.
- e) The protective equipment served its purpose very well. In fact, it probably saved the individual's life. The visor and apron prevented any blast material from entering the face and body.
- f) Communications proved to be adequate at the time of the accident.
- g) Suspension of operations within the other Crews was well co-ordinated and controlled."

Recommendations

The investigators decided that the "accident was unfortunate". They found that all procedures appeared to have been conducted correctly and no evidence pointed towards deminer negligence.

With the aim of further enhancing safety, the following recommendations were made:

- “a) The crew revises pin-pointing and prodding techniques.
- b) All personnel working in the Cordon, particularly around washouts and animal fences, be regularly informed of the possibility of encountering R2M2 mines.
- c) The prodding drill be removed from the standard demining procedure
- d) Constant reminders to deminers on the importance of correct use of PPE.
- e) The application of water before prodding be vigorously enforced.”

Victim Report

Victim number: 351	Name: Name removed
Age:	Gender: Male
Status: deminer	Fit for work: yes
Compensation: not made available	Time to hospital: not applicable
Protection issued: Frontal apron Long visor	Protection used: Frontal apron, Long visor

Summary of injuries:

INJURIES

minor Arm

minor Hand

COMMENT

No medical report was made available.

Analysis

The primary cause of this accident is listed as “*Unavoidable*” because it seems that the victim was working properly and obeying his SOPs when the accident occurred.

The accident was investigated by the group’s own field manager, but seems to have been done with professionalism. Despite his inability to identify a cause, he recommended reinforcing SOPs that had proved effective.

The victim was working on a downward slope. This is believed to be dangerous by many groups. Generally, deminers are required to clear a safe lane that allows them to work up any slope there may be. The failure of the management group to ensure that the deminers worked up any slope may have been a contributory factor. However, if the investigators were right and the slope did lead to the blast being directed away from the victim, it may have been safer to work downhill in that situation.

The accident investigation is considered inadequate because it was edited prior to being made available.