

DDAS Accident Report

Accident details

Report date: 19/04/2006	Accident number: 65
Accident time: 11:10	Accident Date: 27/06/1996
Where it occurred: Calomonda Village, Huambo	Country: Angola
Primary cause: Field control inadequacy (?)	Secondary cause: Field control inadequacy (?)
Class: Excavation accident	Date of main report: 03/07/1996
ID original source: MB/V/VDL	Name of source: INAROOE
Organisation: [Name removed]	
Mine/device: PPM-2 AP blast	Ground condition: grass/grazing area trees
Date record created: 23/01/2004	Date last modified: 23/01/2004
No of victims: 1	No of documents: 2

Map details

Longitude:	Latitude:
Alt. coord. system:	Coordinates fixed by:
Map east:	Map north:
Map scale: Huambo	Map series:
Map edition:	Map sheet: 256
Map name: 1:100 000	

Accident Notes

inadequate medical provision (?)
handtool may have increased injury (?)
partner's failure to "control" (?)
squatting/kneeling to excavate (?)
visor not worn or worn raised (?)

Accident report

The demining group issued frontal protection and their drills assumed the deminer would kneel or squat while excavating.

A Board of Inquiry report dated 3rd July 1996 was found on file at the Angola MAC. The following summarises its content.

The site was a former health post "protected by mines laid in 1984". The mines were laid in a 60° zig-zag pattern at a metre apart. There was high grass, partly burnt off. "Bunches of banana trees" obstructed the line of sight. The platoon had been on site for five months and had found "about 600 PPM-2 mines. "The same platoon had an accident when a deminer prodded on a mine without severe consequences" [see Angola accident on 26th April 1996].

The group were using "EBEX" (Ebinger) detectors [type unspecified but likely to be 535s as in the accident on 26th April 1996]. Ground conditions meant that it was usually necessary to "excavate at a depth between 15 and 20cm" [whether to uncover readings or as routine is unclear].

At around 11:10 the victim got a detector reading and began "prodding and excavating the ground using a bayonet" held in his left hand. A PPM-2 mine detonated. The victim was knocked backward "about" two metres by the blast and was lying partly in an uncleared area. He stood up quickly, leaving his visor which had been "blown away and broken by the blast". The victim received first aid and arrived at the field hospital at 11:20.

The report stated that the victim was still in the field hospital at the time it was written and that he "should be transferred to Luanda". The victim's visor was described as "riddled by fragments and broke at the weak points of the articulation on both sides" [the head-frame]. His frag-jacket "stopped all projections" limiting injuries to the most exposed parts.

When interviewed, the deminer and his partner said that he was prodding properly with his bayonet "parallel to the ground". No one else was in direct sight of the accident.

Conclusion

The investigators concluded that the demining group's SOPs were "very probably not in question" and asked for a copy. The investigators thought it "likely that the activation of the PPM-2 was caused by a rash way of using the bayonet, held like a dagger". This was held as being proven by the injuries and by the fact that the victim's other hand was not being used "to lead the blade". Although the accident could not be "attributed to a direct and obvious negligence" the investigators saw a need for refresher courses and expatriate supervision.

Recommendations

The investigators recommended that refresher training be carried out at least at the end of each task and when encountering "a new or less frequent mine". They said that the demining group's staff should carry out frequent checks and elaborate "a scale of sanctions against professional mistakes" and suggested that when deminers were trained they should receive a book in which to record work history, experience, training and any sanctions imposed.

Victim Report

Victim number: 92	Name: [Name removed]
Age:	Gender: Male
Status: deminer	Fit for work: not known
Compensation: not made available	Time to hospital: not recorded
Protection issued: Long visor	Protection used: Short frontal vest

Short frontal vest

Summary of injuries:

INJURIES

minor Body

minor Face

minor Leg

minor Shoulder

severe Arm

severe Hand

AMPUTATION/LOSS

Fingers

COMMENT

See medical report.

Medical report

A medical report dated 3rd July stated that the victim suffered "traumatic amputation of the fourth and fifth fingers of the left hand....burn lesions (111^o grade) and hurts with loose skin at the whole left forearm....traumatic wounds at the superior lip....fracture at the left cuff". He received emergency surgery on the day of the accident and had no infection.

See also Related papers.

Analysis

The primary cause of this accident is listed as a "*Field control inadequacy*" because, as the investigators concluded, the victim's injuries imply he was prodding dangerously and the error was not corrected.

The victim is presumed to have been squatting to excavate because it was normal practice for this demining group to do so and there is no reason to suppose he was not.

Notice that the victim was wearing this demining group's short vest and suffered shoulder injury. The "vest" does not extend upward to the shoulders. The visor used was a 5mm polycarbonate full-face visor. The demining group's description of the failure as "the visor splitting and being pushed back" probably refers to the head-frame breaking ("splitting") and allowing the face of the visor to be driven back. However, the curvature of that kind of visor would not allow the victim's lip to be damaged without his nose being crushed and his chin knocked backwards. These injuries were not recorded, so I assume that they did not occur and that the victim was wearing the visor in a manner that allowed some of the blast and environmental fragments to enter from below. His visor was probably raised.

The delay in the victim reaching appropriate medical facilities represents a significant failing of management to arrange appropriate CASEVAC facilities.

Related papers

An internal demining group "Mine danger area" report added that 500 PPM-2s were known to have been laid, and so far 600 had been found. The report stated that they had found 10 PPM-2s "in poor condition, corroded, some filled with water and earth".

A further untitled demining group report stated that the accident occurred at 11:05. The victim "lost the two extreme fingers of his left hand and the top part of his thumb". He appeared to have "extensive lacerations and burns to his left forearm with some blast and fragmentation going up his arm....very minor fragmentation wounds to his left shoulder, upper left arm and left lower leg... (and)... a minor cut to his upper lip which required stitches as a result of the visor splitting and being pushed back". The demining group expressed an intent to improve training to ensure no further lapses occur.