DDAS Accident Report

Accident details

Report date:	19/04/2006	**Accident number:**	60
Accident time:	11:25	**Accident Date:**	25/02/1997
Where it occurred:	Bela Vista, Bie Province	**Country:**	Angola
Primary cause:	Management/control inadequacy (?)	**Secondary cause:**	Inadequate training (?)
Class:	Missed-mine accident	**Date of main report:**	03/03/1997
ID original source:	HM/GP/MP - H242	**Name of source:**	INAROEE
Organisation:	[Name removed]		
Mine/device:	PPM-2 AP blast	**Ground condition:**	pylons and surrounds
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:	Chinguar	**Map series:**	
Map edition:	Folha 257	**Map sheet:**	
Map name:	1:100 000		

Accident Notes

inadequate equipment (?)

inadequate medical provision (?)

handtool may have increased injury (?)

inadequate area marking (?)

visor not worn or worn raised (?)

safety distances ignored (?)

inadequate training (?)

Accident report

The demining group used a two-man team and a one-man drill at the site. In this the same deminer cuts undergrowth, excavates and uses the detector.

An investigation, dated 3rd March 1997, was made by the country MAC and its report was found on file. The following summarises its content.

The report stated that the demining task was a series of pylons and a bridge. Teams of two deminers per pylon were clearing a 10 metre square area around the base. When the board of inquiry visited the site on 1st March, demining was in progress around other pylons and they ordered it to stop immediately. The inquiry criticised the fact that the site had been tidied before their arrival. The were told that the victim had located two mines that day prior to the accident. These were destroyed and the victim was checking the blast area with his detector when he got another reading. The reading was in front of a partly exposed mine. The victim seemed to be "concerned with the (exposed) mine". He was wearing his protective equipment "correctly" but started to excavate the partly exposed mine without prodding the new reading first. At 11:25 the hidden mine detonated. The victim was "less than 50cm" from the detonation.

Fragments were found in the deminer's vest but none had penetrated. The blast injuries to the face did not include fragments, which the team thought implied that the visor had given some protection. [A photo of the visor is included, severely distorted and sooted - with the damage apparently on the inside.]

At 13:05 the victim arrived at a field hospital and at Luanda Hospital at 18:00. The country MAC amended the demining group's plan to take the deminer to a private hospital, which may have contributed to the delay and was criticised by the investigators.

Conclusion

The investigating team decided that the deminer's negligence, failures of supervision and the "unorthodox method of clearance at the site" all contributed to the accident. It was further stated that "insufficient detail" in the SOPs was a factor. The unorthodox methods used at the site included using unpainted and irregularly spaced sticks that were not in a straight line and marking a detector reading with grass. The demining group's published methods were not used. Just before the accident the supervisor destroyed two mines in the victim's lane. These were spaced so that the deminer went past one to detect the other. This was deemed "inherently unsafe" by the investigators. Another deminer was working only 5m from the victim, which they also observed was unsafe.

Recommendations

The inquiry recommended that training be modified and SOPs amended. They said that the victim's team should be retrained, concentrating on marking procedures and the use of a front of lane marker. The supervisors should "re-familiarise themselves with the SOP". They decreed that clearance must be suspended until the re-training was completed and required the demining group to revise their SOPs. They also recommended that the Angola MAC expedite the standardisation of Angolan Operating Procedures and assess the other demining sites controlled by this group.

Victim Report

Victim number: 82	**Name:** [Name removed]
Age:	**Gender:** Male
Status: deminer	**Fit for work:** DECEASED
Compensation: not made available	**Time to hospital:** 6 hours 35 minutes
Protection issued: Long visor Short frontal vest	**Protection used:** Short frontal vest

Summary of injuries:

INJURIES

severe Eyes

severe Face

severe Hand

AMPUTATION/LOSS

Finger

FATAL

COMMENT

No medical report was made available. The victim died three days after the accident.

Analysis

The primary cause of this accident is listed as a *"Management/control inadequacy"* because the demining group's SOPs were not followed by the field supervisors. Their inadequate field management (including an expatriate "expert") appears to illustrate a failing of management at country level within the demining group. The secondary cause is listed as *"Inadequate training"*.

The victim's injuries were unusually severe. Although the unacceptable time-lapse between the accident and treatment may have contributed to the fatality, these records include several where deminers have initiated blast mines more than twice the size of this one without adequate facial protection and have not died.

It seems likely that the victim was working with his visor raised and leaning forward over the top of the mine that detonated. The injuries are not detailed, but throat and neck injuries seem most likely. It is likely that the victim's handtool (or parts of it) struck the victim's neck, causing the severe injuries (see Related papers).

Related papers

The demining group produced an internal investigation report which was made available. This report indicated that a second mine detonated "sympathetically" when the first initiated. The second mine was 40cm away. The report stated that the victim's "visor was destroyed, probably by the impact of his trowel", noting that the visor did not protect him from the blast. The report acknowledged that a "standard pattern" of clearance for confined areas would "help avoid the practice of mine-hunting".

A letter from the Angola MAC to the demining group (dated simply March 1997) pointed out that in the accident reports of 3rd March 1997, 19th November 1996 and 3rd July 1996 "the same points were raised" with regard to inadequate supervision. That letter demanded that the Angolan Supervisor and the senior expatriate Supervisor in charge when this accident occurred "should not be permitted to continue working in demining operations in Angola".

A letter from the demining group to the Angola MAC confirmed that retraining was under way and invited observation. It also stated that the supervisor would only be used as an interpreter in future. The fate of the expatriate senior supervisor was not mentioned.