DDAS Accident Report

Accident details

Report date:	11/03/2004	**Accident number:**	48
Accident time:	11:25	**Accident Date:**	16/09/1998
Where it occurred:	Nr Ebalanga, Huambo	**Country:**	Angola
Primary cause:	Field control inadequacy (?)	**Secondary cause:**	Management/control inadequacy (?)
Class:	Excavation accident	**Date of main report:**	19/09/1998
ID original source:	JB/MH/CC	**Name of source:**	HT (field)
Organisation:	[Name removed]		
Mine/device:	PPM-2 AP blast	**Ground condition:**	ditch/channel/trench
Date record created:	22/01/2004	**Date last modified:**	22/01/2004
No of victims:	1	**No of documents:**	2

Map details

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

Accident Notes

inadequate equipment (?)

inadequate medical provision (?)

squatting/kneeling to excavate (?)

use of pick (?)

no independent investigation available (?)

visor not worn or worn raised (?)

inadequate area marking (?)

Accident report

The demining group are believed to have been running two-man teams with a one-man drill at this time. In this arrangement, the working deminer uses all the tools, including the detector, while his partner rests and watches, correcting any errors he may see. However, they may have using a one-man team at the time (as was current in 1999). The demining group issued frontal protection and their drills assumed the deminer would kneel or squat while excavating.

No formal accident report was on file at the Angola MAC. The demining group's Angola office provided an internal accident report prepared by three of their personnel. This report was unsigned and undated but another document indicated that the investigation took place before 19th September 1998. The report stated that a 31-man team started clearing a disused military position near Epalanga on 2nd September 1998. The team had located, marked and destroyed seven PPM-2 mines laid in a trench system (including one mine found by the victim on 11th September 1998). The victim had been a deminer since 12th April 1996.

The team started work at 07:00 and at 10:00 the Operations Officer and an ex-pat (who were later to carry out the investigation) arrived for a routine inspection that included the victim's lane. At 11:10 the Assistant Supervisor issued the victim with a recharged battery for his detector and when he returned to calibrate the victim's detector he also checked his lane for missed metal contamination.

At 11:25 The victim initiated a PPM-2 mine and was blown backwards onto his detector. At 11:26 the victim was given first aid and was conscious. He had suffered "facial injury and lacerations to right hand". One minute later he was moved to the administration area where he was treated for "injuries to right hand, right knee" and his face was bandaged. The victim was evacuated by Land Rover at 11:40 and arrived at Huambo Hospital at 12:30. On arrival the escort was presented with a list of medical supplies to buy.

Conclusion

Interviews were conducted with six people including the victim on the day of the accident. From these the investigators concluded that the victim did not use the correct detector sweep pattern and was working beyond the limit of 1½ detector heads in front of the end-of-lane marker. He did not correctly identify the signal and apparently carried out no excavation or probing prior to initiating the PPM-2 mine with his hoe (despite there having been a detection/excavation demonstration on site that morning). They concluded that the victim lied about the procedures he employed and the tools he used (the victim stated that he was not using a hoe, but examination of the tool suggested otherwise). Also, the Casevac vehicle travelled too fast for the road conditions (38.5km in 35 minutes), and the string on the end-of-lane marker was black and difficult to see. The investigators said that the hoe, if used correctly, is useful for excavation but not for detection tasks.

Recommendations

The investigators recommended that the victim deliver a presentation on incorrect mine clearance to other teams. They suggested that the prior preparation of "hospital packs" would speed up the process at admission. Also that drivers and supervisors should be briefed on vehicle speed during Casevac, and that only white cord should be used for end-of-lane markers.

Also on file was another internal document dated 19th September 1998 with another version of the conclusions of the internal inquiry. It varied by observing that the incorrect use of the hoe was the cause of the last two accidents and stressing that it should only be used for excavation. It also suggested that the group "Organise a book for registry of all faults committed by every team (every safety rule and the discounts done)", and that teams should do a complete detector sweep of the area before starting excavation.

Victim Report

Victim number:	67	**Name:**	**[Name removed]**
Age:		**Gender:**	Male
Status:	deminer	**Fit for work:**	presumed
Compensation:	not made available	**Time to hospital:**	ot made available
Protection issued:	Long visor Short frontal vest	**Protection used:**	Short frontal vest, Long visor

Summary of injuries:

INJURIES

minor Face

minor Foot

minor Hand

minor Leg

COMMENT

No medical report was made available.

Analysis

The primary cause of this accident is listed as a *"Field control inadequacy"* because the victim was working inappropriately and his actions went uncorrected. His improper actions included wearing his long, full-face visor at an angle that allowed his lower face to be injured.

Senior management failings were demonstrated by the most senior ex-pat management suggesting that the deminer was not concentrating for personal reasons (see Related papers), rather than addressing an obvious control failure. Country management of the organisation involved showed more responsibility with their suggestions for preventing recurrence.

Related papers

A letter about another Angolan accident involving this group dated 26th September 1998 makes mention of this accident. The investigation of the accident on 16th September concluded that "there was nothing amiss in [the group's] rules, supervision or conduct. The report will focus I believe on his mental state – his wife left him 4 days before. Cause of accident inattention."

An initial notification of the accident to the Angolan MAC by the then Director of the group's work in Angola, written in Portuguese and dated 16th September 1998, was on file. It stated that the accident occurred at Epalanga, Huambro at 11:30. The victim suffered injuries to his right hand and foot and the lower part of his face. He was evacuated in an adapted vehicle to Huambo Hospital, arriving at 12:30. At the time of writing it was believed that the injuries would not result in amputation.