DDAS Accident Report

Accident details

Report date:	11/03/2004	**Accident number:**	33
Accident time:	09:13	**Accident Date:**	17/11/1995
Where it occurred:	Homoine, Inhambane Province	**Country:**	Mozambique
Primary cause:	Field control inadequacy (?)	**Secondary cause:**	Inadequate training (?)
Class:	Excavation accident	**Date of main report:**	27/11/1995
ID original source:	ADP-6/ MC/TL	**Name of source:**	CND/IND/ADP
Organisation:	[Name removed]		
Mine/device:	PMN AP blast	**Ground condition:**	metal fragments
Date record created:	22/01/2004	**Date last modified:**	22/01/2004
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

inadequate equipment (?)

inadequate training (?)

handtool may have increased injury (?)

inadequate medical provision (?)

no independent investigation available (?)

squatting/kneeling to excavate (?)

Accident report

An internal investigation of the accident was carried out by Technical Advisors with the demining group and made available. The following summarises its content.

The demining platoon had "cleared $5,160^2$ metres and eight mines at Homoine before the accident". The mines were laid in a narrow belt but not in a pattern. The mines found before were PMN, PMN-2, PMD6 and POMZ2M. The victim was in a crouching position with his arm outstretched (holding a trowel) when he initiated a PMN with his right foot. He was not using his detector (which was 12 metres away). He was taken to hospital at 09:35 and arrived at 10:05. A blood shortage meant that other deminers had to donate three litres of blood.

The victim's boots, photographed by the researcher in 1995, are shown here.

The investigators stated that the detector (a Schiebel AN-19) was "working properly and was capable of detecting a PMN at over 30cm depth". They found two fragments in the area cleared by the victim. The striker and plunger spring of the PMN were discovered at the seat of the explosion. The crater was 27cm deep – which the investigators took to indicate that the mine was probably 5-10cm deep.

Recommendations

The investigators said that the use of both detectors and excavation should be phased out where detectors could be used alone, and that deminers should get more training on using detectors in contaminated soil. They further recommended that another detector that could be used kneeling should be investigated. That deminers should be fined if they leave metal in "cleared" areas, that the hospital should be warned to expect a casualty and deminers' blood groups should be on their ID cards. They added that, at Inhambane hospital, medics should stay with the patient to ensure he gets good care and food.

One investigator made a supplementary accident report regarding the victim's sobriety on 12th December 1995 after talking to the surgeon who did not suspect alcoholic influence. Also, the victim's friends said he was not drinking the night before. The investigation into sobriety went no further. The other investigator commented (4th September 1998): "I'm afraid that I don't recall much … I do recall there was a hell of a lot of speculation that the guy was drunk".

Victim Report

Victim number:	49	**Name:**	**[Name removed]**
Age:	38	**Gender:**	Male
Status:	deminer	**Fit for work:**	no
Compensation:	US$3,300	**Time to hospital:**	1 hour 8 minutes
Protection issued:	Safety spectacles	**Protection used:**	Safety spectacles

Summary of injuries:

INJURIES

severe Body

severe Leg

AMPUTATION/LOSS

Leg Through knee

Arm Above elbow

COMMENT

See medical report.

Medical report

The medic reported that at 09:13 hours a mine detonated and that the victim received medical care after seven minutes. His injuries were "amputation caused by the mine to the left leg and arm and deep wounds to the left side of the body. Traumatic shock (3rd degree) on arrival in hospital.

The compensation award document (in Portuguese), signed on 16th July 1996, lists the injuries as: amputation of the right arm at the shoulder; amputation of the right leg above the knee, and deep lacerations to the left thigh. The victim was rated 100% physically disabled and had severe scarring on the left leg. This report concluded that the victim could no longer work as a deminer, and that he needed another person to assist him with his daily routine. He was awarded 60% + 40% x 30 x US$110 (salary) = US$3,300.

The victim's DOB was 27/05/57.

Analysis

The primary cause of this accident is listed as a "Field control inadequacy" because the victim was in breach of SOPs and was not corrected. The investigators suggest that both training and equipment may have been inadequate, which may have been contributory senior management failings. The secondary cause is listed as "Inadequate training".

The researcher heard the rumour that the victim was intoxicated (from the investigator who later decided that he was not) while visiting the demining group in 1995. There was no conclusive evidence that he was, or was not. However, an independent investigation might have been more likely to uncover the truth than an internal inquiry.

In case of confusion over the victim's activity at the time of the accident, he was supposed to be both using a detector and "Excavation" to ten centimetres. Both should have been done regardless of whether there were detector readings. While thorough, (and still in use by some

groups in 1999) this method seems to lead to deminers seeing little point in bothering to use the detector.

It is likely that his trowel, or parts of it, caused his upper arm injuries (as indicated informally).

The method of determining depth of the device by reference to the crater depth without measuring the soil hardness is unreliable.

The “inadequate equipment (?)” noted refers to the issue of industrial safety spectacles as PPE.