

DDAS Accident Report

Accident details

Report date: 22/01/2004	Accident number: 21
Accident time: 14:05	Accident Date: 24/03/1998
Where it occurred: Sabie, Moamba, Maputo Province	Country: Mozambique
Primary cause: Unavoidable (?)	Secondary cause: Management/control inadequacy (?)
Class: Excavation accident	Date of main report: 24/03/1998
ID original source: CR/JB	Name of source: CND/IND/MCM
Organisation: [Name removed]	
Mine/device: PMN-2 AP blast	Ground condition: hard, rocky
Date record created: 12/01/2004	Date last modified: 12/01/2004
No of victims: 1	No of documents: 3

Map details

Longitude: 32° 13' 02" E	Latitude: 25° 14' 35"
Alt. coord. system:	Coordinates fixed by:
Map east:	Map north:
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

protective equipment not worn (?)
squatting/kneeling to excavate (?)
mechanical follow-up (?)
handtool may have increased injury (?)
inadequate medical provision (?)
no independent investigation available (?)
inadequate investigation (?)

Accident report

An internal report on the accident was made to the National demining authority and they made that report, dated 24/03/98, available in November 2000. The report was in English. The following summarises its brief content.

The victim was working as a deminer in a lane where "mechanical demining" had taken place. He detonated a PMN-2 mine with his "demining tool".

"The mine was located next to a rock in the ground which could be the reason why it was not detonated by the mechanical operation."

The picture below shows the crater next to the large rock.



The victim lost his left arm above the elbow, suffered "slight shrapnel wounds to both lower legs....shrapnel wounds to right hand. A piece of metal suspected to be part of the demining tool (size 5cm x 5cm) was removed from his right armpit." [See "Related papers" where eye injury is mentioned.]

The victim was evacuated to hospital by helicopter.

The team leader was sitting in a CASSPIR parked beside the minefield when he heard the detonation at 14:05. He and the medic went immediately to investigate and found the victim "lying face down in a cloud of dust with his hat and detector earphones still on his head".

The Team Leader assisted the medic to move the victim to a safe area. The victim has sustained a "severe wound to his left upper arm and shrapnel wounds over his body, arms, legs and face. He was bleeding heavily but could still communicate". The Team medic assisted the Senior medic to start "advanced life support".

The Team Leader told a driver to inform the base camp. While the victim was being stabilized I determined that he had detonated a PMN-2.... approximately 2.5m from the edge of the minefield" and inside his 1m wide lane. "Because of the nature of his wounds and the fact that his Ebex mine detector's search head was intact, I believe that [the victim] somehow detonated the mine while investigating a signal from his detector. This particular mine had also been indicated by the dog team earlier in the day. The mine was directly adjacent to a medium sized rock which probably explains why it was not detonated by the mechanical team earlier. The hard, compacted rocky soil in the area also added to the hazard."

At approximately 15:00 the victim was stabilized and ready to be transported in the....Toyota Hilux, but was transported in the CASSPIR because the Toyota proved too uncomfortable on the bad road. We arrived at base camp approximately 15:35 where the victim was again stabilized while waiting for the evacuation helicopter."

The helicopter arrived at 16:30 and the doctor on board took over the victim's treatment. The helicopter left at 17:00 for Nelspruit, South Africa.

Victim Report

Victim number: 34	Name: [Name removed]
Age: 35	Gender: Male
Status: deminer	Fit for work: not known
Compensation: not made available	Time to hospital: 3 hours 30 minutes
Protection issued: Not recorded	Protection used: none

Summary of injuries:

INJURIES

minor Body

minor Legs

severe Eyes

severe Face

severe Hand

AMPUTATION/LOSS

Arm Above elbow

COMMENT

No medical report was made available.

Analysis

The primary cause of this accident is listed as "Unavoidable" because the victim may have been working appropriately at the time. The secondary cause is listed as a "Management/control inadequacy" because the failure to provide a dedicated ambulance vehicle was a management failing, as was the provision of the inappropriate excavation tool that shattered on detonation.

It is not clear whether PPE was issued, but the group usually made it "available on request" at that time. The failure to insist on excavating deminers wearing a visor is a management failing.

The internal accident report is inadequate because it lacks detail. The mention of eye injury is in a secondary paper (see Related papers). It may have been omitted from the main report because the group had been criticised for not wearing eye protection.

Related papers

The demining company supplied their own "Casualty report" on 13th January 1999. In this it stated that the victim was "in the process of clearing mines" when the accident occurred. His injuries were described as "open injuries to his left arm with total discontinuation of blood supply and also injuries to most big nerves. Furthermore he had shrapnel in his right hand as well as in both legs. His eyes were also affected". He was evacuated by helicopter to Nelspruit Hospital.

The file included a photograph of the victim being visited by IND staff while in a Mozambican hospital, so presumably he was returned to Mozambique after initial treatment.

Statements

The Platoon Commander made a statement about the accident. The statement was in Portuguese. The following summarises its translated content:

The victim's left arm was broken near the armpit and the whole body was hit by mine fragments. It is thought that he was trying to dislodge a large rock which was in the vicinity and that the accident happened while he was digging. Given the accident on 10/03/98 and now this one on 24/03/98, I conclude that the time of day (same in both cases) may have been a contributory factor [the group appear to have worked long hours].

The evacuation of the victim went slowly because of the road conditions

The Platoon commander concluded that the mechanical demining used can cause accidents because the vehicles can miss mines.

The Platoon commander recommended that the working hours should be changed/reduced.