DDAS Accident Report

Accident details

Report date: 22/01/2004

Accident number: 19

Accident time: 12:15

Accident Date: 27/03/1998

Where it occurred: Infulene-Komatipoort power line, Moamba District, Maputo Province

Country: Mozambique

Primary cause: Management/control inadequacy (?)

Secondary cause: Inadequate training (?)

Class: Survey accident

Date of main report: 21/04/1998

ID original source: No.76/CND/DED/98

Name of source: CND/IND

Organisation: [Name removed]

Mine/device: PMN AP blast

Ground condition: rocky, dry

Date record created: 12/01/2004

Date last modified: 12/01/2004

No of victims: 2

No of documents: 3

Map details

Longitude: 32° 05' 88" E

Latitude: 25° 36' 42" S

Alt. coord. system:

Coordinates fixed by:

Map east:

Map north:

Map scale:

Map series:

Map edition:

Map sheet:

Map name:

Accident Notes

inadequate medical provision (?)

safety distances ignored (?)

protective equipment not worn (?)

inadequate area marking (?)

inconsistent statements (?)

inadequate investigation (?)

inadequate training (?)

Accident report

An accident report on an IND form was made available by IND. Written in Portuguese, the investigator did not fill in all of the fields and did not sign or date the report. The report was translated and is transcribed here as accurately as possible.

The weather at the time of the accident was cloudy and the ground was dry and stony with burnt vegetation and grass – as shown in the photograph below.

The accident occurred near a high voltage pylon to the south of Moamba town and approximately 22 km from the demining group's camp. The pylon was mined during the armed conflict and a barbed wire fence was put up to prevent the entry of people and animals. Outside this fence were other mines of the PMN, PMN-2 and PMD-6 types.

The accident involved a demining team working under the supervision of their Project Manager and included the following people: paramedic, 1st Chief instructor of the pylon section, 2nd Chief instructor of the pylon section, and an Interpreter.

The team was on an information gathering exercise to get better acquainted with the area, and to "pick up" some mines for use when training deminers. The team carried with them the following equipment:

- four Ebinger 535 detectors and one 420 model
- a pick-axe
- marking sticks (poles for use in demarcation)
- two vehicles - a Nissan 4x4 and an Isuzu 4x4
- a cellular telephone

The Project Manager was opening an access lane to high voltage pylon number 58 and was in front of the other team members. About 8m behind him were the two Chief Instructors, with 2 to 4m between them. As they neared the area marked with barbed wire there was a sudden explosion. As a result both Chief Instructors were injured. Victim No.1 lost his left leg and had serious injuries to his left arm. Victim No.2 suffered minor injuries to his face, left ear and head as a result of fragments. The accident occurred 7-9 m from the pylon and about 1 km from the N2 road

The paramedic gave first aid within two minutes and the victims were transferred to Moamba Hospital, using the Isuzu as an ambulance. From Moamba they were later transferred by ambulance to Maputo Central Hospital in a helicopter.

Conclusions

The investigators concluded that:

1. The mine that caused the accident was identified as a PMN (Soviet made) and was accidentally activated by Victim No.1 when he stepped on it.
2. During the investigation it was shown that gross errors were made with regards to the methods used in the information gathering exercise. The following points were noted:
   proper safety measures were not in place and were not observed.

no organised work system was in place.

there were inadequate marking methods and a lack of tapes.

the reconnaissance exercise was planned and executed without the knowledge of the national authority.

3. A cellular telephone was used for communications.

4. The method of transportation of the victim in the back of an ISUSU 4x4 used as an ambulance is not suitable for such use. [It did not have communications equipment, the medical kit was incomplete, and it did not correspond to the National minimum requirements].

Recommendations

The investigators recommended:

1. In each and every case of an accident, IND must be the first to be informed through the formal channels.
2. After the first contact with IND it is necessary to produce a written report as soon as possible using the format approved and supplied by IND. Any attempt to hide of change information or to obstruct the investigation process will be considered to be an absolute lack of competence.
3. Every demining activity has to be based on the internal SOPs of each demining organisation/company and on the National Humanitarian Demining standards of IND.
4. It is absolutely necessary to invest in human resources guaranteeing the physical safety of people by every means possible.

Annexes

Anexo A1 - report by Project Manager dated 28th March 1998. [See related documents.]

Anexo A2 - information supplied by the Project Manager concerning the accident (dated 31st March 1998). [See Statements.]

Anexo B1 and C were photographs of the Isuzu 4x4 used as an ambulance and of the area where the accident occurred (shown above).

Victim Report

Victim number: 31	**Name:** [Name removed]
Age: 48	**Gender:** Male
Status: supervisory	**Fit for work:** DECEASED
Compensation: not made available	**Time to hospital:** 3 hours
Protection issued: Not recorded	**Protection used:** none

Summary of injuries:

INJURIES

minor Legs

severe Hand

FATAL

COMMENT

See Medical report.

Medical report

No formal medical report was made available.

During an operation at Maputo Central Hospital, Victim No.1's left leg was amputated 10cm (4") below the knee.

Victim No.1 was transferred from Maputo Central Hospital to a hospital in South Africa and died en-route.

Victim Report

Victim number: 32	**Name:** **[Name removed]**
Age:	**Gender:** Male
Status: supervisory	**Fit for work:** presumed
Compensation: not made available	**Time to hospital:** 3 hours
Protection issued: Not recorded	**Protection used:** none

Summary of injuries:

INJURIES

minor Eyes

minor Head

COMMENT

No medical report was made available. See Related papers.

Analysis

The primary cause of this accident is listed as a *"Management/control inadequacy"* because the personnel involved were the most senior members of the ex-pat specialist commercial demining group, yet they breached basic safety SOPs at many levels. It seems likely that the group's manager and trainers involved in the accident were themselves inadequately trained.

Medical provision was inadequate. Not only was no ambulance available, the medical kit at the site lacked many of the essential items it was meant to contain (see Related documents).

As a result of this (and other accidents involved the demining group) the National Authority determined that they were no longer welcome to operate in Mozambique.

Related papers

There are three related documents, an Annex, a letter, and a list of medical equipment supposed to be on site (much of the equipment was absent in this instance).

Annex A1:

Report from Project Manager

Letter/FAX from the Project Manager to the Director of IND dated 31st March 1998. This was apparently a covering letter for the accident report. The time of the accident was recorded as 12:15.

General information

Pylon No.58 of the power line from Infulene to Komatipoort enclosed by barbed wire with burnt out vegetation.

Short description of the accident

Near the Pylon No.58 were working three members of [name excised] in a reconnaissance exercise in an area recognised as mined. One of the three members of the team was a victim of an anti-personnel mine.

[NOTE – the admission of only one victim.]

Other injuries and comments

Loss of left leg below knee, serious injury left hand, light injuries on the right leg.

Letter

In a letter dated 22nd November 1998 and addressed to the directors of all demining groups active in Mozambique at the time (ADP, HALO, NOA, Mine-Tech, MECHEM, SCS, CIDEV, Afrovita, HI) the Director of IND said:

Ref: report on the investigation of the mine accident which occurred on 27th March 1998.

Following an accident involving an anti-personnel mine at Tower No.58 along the power lines running from Infulene to Komatipoort in Moamba Distruict in Maputo Province an investigation was carried out by a team from CND [now IND]. It is our sincere wish that lessons will be taken from this report to avoid similar occurrences in the future for the good of everyone.

Medical equipment

A list of medical equipment supposed to be available to the group was provided as an appendix. It is reproduced below in Portuguese. A pack was on site, but 19 of the items were missing.

1 brancard	1 natelas coquille	2 bottles oxygen
Sonde tracheale	Tubular de perfusion	Aspirateur de mucosites
Laryngoscope	Aiguille 1M-1V	Ambu and masque
Otoscope	Syringes 1/5/10cc	Stethoscope
Sonde d'aspiration	Catheter G 16-18	Tensiometre
Coton	Gauze steriles and non-sterile	Elastoplast
Garot	Ruban adhesif	
Boite d'instruments		
Scissors	Bandelette reactive de	Gants a usage unique
Fil a suture	glycemie	Canules de Guedel
Champ sterile	Antiseptic alcoolise et	Attelle de Kramer
Planche MCE	non alcooise	Cournertures de survie

Injectables

Morphone	Atropine	Pethidine	Adrenalin plasma
Xylocaine	Isupel	Lasilise	Soludecadron

Solute de perfusion -	Valium	Ketalan
Solute de perfusion -	Ringer Lactate	

Equipment for Mozambican paramedics

1 brancard	1 trousse contenant

Tubulare a perfusion

Solute de perfusion

Seringues 2/5/20cc

Aiguilles IV-IM

Gants a usage unique

Garrot

Pansements

Compresses steriles et non steriles

Bandes

Liquid antiseptic

Courvetures de survie

Insuflateur

Attelle de Kramer

Coton

Statements

Appendix 2

Letter from Project Manager (now calling himself “Engineer”) to the Director of IND.

Ref: work accident

Dear Sir,

I would like to inform you that on the 27th of March 1998 at 12:15pm we had a mine accident in Moamsa district along the power line which runs from Infulene to Komatipoort.

This accident happened during a reconnaissance exercise which I was chief and which had as its main objective to "acquaint" French Instructors in the demining of mines under power pylons, the conditions in which they would be working and at the same time gaining concrete experience as to the suitability of any training methods.

During the course of the reconnaissance exercise Mr [name removed: Victim No.1] found himself a victim of a mine accident. His left leg was amputated and he sustained serious injuries on his left arm. Mr [name removed: Victim No.2], who was nearby, sustained minor facial injuries due to fragments.

Victim No.1 was immediately taken to Moamsa clinic by ambulance where he was later transferred to Maputo hospital (special clinic). His left leg was amputated 10cm below the knee and he was given a support on his left arm (sling).

An inquiry will be held to verify the causes of the accident.

Yours sincerely

Signed: Engineer, Chief Project Officer