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Humanitarian Demining Accident and Incident Database

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DDAS Accident Report

Accident details

Report date: 13/08/2016	Accident number: 808
Accident time: 08:10	Accident Date: 12/10/2010
Where it occurred: MF No.2, Archamazor Kevron village, Darvoz district	Country: Tajikistan
Primary cause: Field control inadequacy (?)	Secondary cause: Victim inattention (?)
Class: Excavation accident	Date of main report: Not recorded
ID original source:	Name of source: TNMAC
Organisation: [Name removed]	Ground condition: hard; rocks/stones; steep slope
Mine/device: PMA-2 AP blast and ML-7	Date last modified: 13/08/2016
Date record created:	No of documents: 1
No of victims: 1	

Map details

Map east: 070°53'58.8" E

Map north: 38°28'25.4" N

Accident Notes

Inadequate investigation (?)

Visor not worn or worn raised (?)

No independent investigation available (?)

Accident report

The accident report was made available by the national mine action authority in 2015. It was made available in Tajik and has been translated. The original formatting and many pictures have been removed. The original report is held on file. The demining group manager in country was invited to make available the report in English (as it was originally compiled) but declined. The report is reproduced below, edited for anonymity. Text in square brackets [] is editorial.

INTRODUCTION

Due to the landmine explosion on 12 October 2010, which resulted in one de-mining casualty from de-mining team #4 of [Demining group], a commission for the investigations of the mine accident in the field was established among the representatives of the [Demining group] and TMAC.

This incident occurred during the mine clearance operations in the field. The mine clearance group belongs to the [Demining group] which is operating in Tajikistan. The tasking of this area for mine clearance operation is in the priority list.

The commission for investigation comprised the following persons:

[Demining group] Program Director

[Demining group] Operational Supervisor

[Demining group] deputy head of operations

DEPLOYMENT AND ORGANIZATION

Humanitarian De-mining Team #4 had deployed on 14, September 2010 to the district of Darvoz, Arcamazor's minefield area and departed from Dushanbe at 07:00 o'clock. The Humanitarian De-mining Group comprised the following staff:

Name/surname and position: [All names removed]

Supervisor; nine deminers; Doctor; two drivers.

According to the TMAC task TS TM 40 MF 2 Arcamazor village, Darvoz district, a special procedure was established and Red Folder Instructions prepared. [Name removed], Head of TMAC Operations on 07 April 2010, sent this Red Folder Instructions to [Name removed] – [Demining group] Operational Supervisor.

Based on TMAC tasking of TS TM 40 MF 2 in Arcamazor village, Darvoz district the Humanitarian Demining Group on 07 April 2010 arrived in the field at 08:00 hours, and established an administrative area on the same day.

ADMINISTRATION AND DISCIPLINE IN THE FIELD

All members of the mine clearance team were located in the northern part of the area and living in a tent at a distance of 2300m along the highway of Dushanbe Kulyab. [Demining group] has 13 employees who were working under the Head of Mine Clearance Team #.4.

De-miners were deployed by distances according to the safety requirements adopted in the QSA. Members of the teams were having a 10 minute rest time, part by part, at the operations Control Point.

During each 10 minute break, the teams under the control of the head of Group discussed the issues of clearance and improvement of the work in the field according to the information gathered.

The activities of the demining Team #-4 started on 07 April 2010, in the mined area. The team works from 06:00 to 13:00. The de-miners work 50 minutes in the working area and have 10 minutes break.

COMMUNICATION

[Demining group] uses the following communication tools, mobile telephone, satellite phone and HF-handy in the cars. The mobile phone connections are good in this region. [Demining group] communicate from the field to the Dushanbe office through regular communication via mobile telephone.

On the accident date, the team had mobile communication and the head of the group GB-4 [Name removed] reported to the head of operations of [Demining group] at 08.10.

EQUIPMENT AND TOOLS

The demining metal detector Ebinger 421 GC module was used in the field. The area test has shown that the detector of the injured deminer was able to detect a small piece of iron in this field.

The deminers who were working in this area had the necessary [Demining group] set of demining tools which are listed below:

- Prodder tools (2 types)
- Shovel
- Ruler 20cm
- Plastic bucket for metal
- Wood and line
- Big and small scissors/shears
- Chopper

All PPE and de-mining equipment in the field was in accordance with the SOP.

The working areas were marked according to the SOP of the [Demining group] using the marking stick 1.5 and 0.5 metres long painted red.

GENERAL INFORMATION ABOUT MINEFIELD AREA

Darvoz district is located near the border with Afghanistan. The accident place is 22 km from Darvoz which takes approximately 38 minutes by car.

Before starting the work in this minefield according to the information received by survey team and discussion held with the local community of Kevron and accident evidence, the community were aware that the area was planted with fragmentation anti-personnel mines type OZM-72, MON 50 and blast anti-personnel mine PMN-2, and ML-7. In this area in 1997, one community member [Name removed], became a victim and lost one leg.

The minefield coordinates of the area are 38°28'25.4" N: 070°53'58.8" E. The total approximate area of the mined area is 25,000m and up until 11th October, the team had cleared an area of 11,139 m². Due to the high vegetation in the area the de-mining team faces difficulties for mine clearance operation.

MINE ACCIDENT AREA IN THE MINEFIELD OF ARJAI MAZOR (KEVRON), N. DARVOZ EXPLOSION

As a result of a PMN-2 and ML-7 mine explosion on 12 October 2010 at 8:10 a deminer from team#4 was injured. The team leader [Name removed] reported via cell phone to the [Demining group] Operational Management at 08.12 o'clock.

At 08:16 the Head of the Operational Management of [Demining group] Mr.[Name removed] reported to the radio-operator [Name removed] about mine explosion in the mine field No. 2 - Arjamazor village Kevron. A deminer of the group #4 [the Victim] was injured from PMN-2 and ML-7. Their characteristics are indicated in below table.

TYPE OF MINES

PMN – 2: production – Russia; plastic; Weight - 450gr; Main charge: 100gr; Colour - green and top cross black; Method of activation- pressure; Activation weight - more than 3 kg.

Russian-ML7; plastic; Weight 100 grams; Main charge 40 grams; Length 6.9 cm; Height 3cm.

[Drawings and sketches of mine types removed.]

Evacuation plan from the place of explosion to the hospital of the Darvoz district [Picture removed].

CHAIN OF EVENTS AND PROCEEDINGS

- 6:47 Operation started in the field.
- 8:06 [Name removed] Reported from clearance operation.
- 8:16 Explosion in MM TS TM # 40 MF 2 Archamazor, MAT-4, deminer injured [Name removed].
- 8:17 Report about accident in the minefield.
- 8:22 Report about accident, victim treated by the field doctor/medic.
- 8:28 Accident Report from the field to TMAC.
- 8:30-8:35 Stopping operations in all mine clearance areas.
- 8:41 Preliminary report about casualty, amputation of left hand, face fragmentation, eyes unknown.
- 8:52 His left hand (Fist) was amputation, the face was wounded with fragmentation.
- 9:09 The injured deminer taken to the medic and taken by ambulance to the district hospital.
- 9:39 The ambulance and medic arrived in the district hospital:
- 9:48 Victim's condition was reported as: burned eyes, broken left hand , unconscious, face and lips swollen.
- 9:51 Based on the preliminary report on the eye injury, it was decided that the victim should be transferred to Dushanbe hospital.
- 10:35 According to [a witness who] was in the area of explosion, the deminer was working without head/face protection.
- 10:55 According to the preliminary report, after investigation of the explosion place, it was found that the visor was approximately 2.5 meters away from the place of work.
- 10:56 After doctors' investigation, it was reported that the Victim's left hand was seriously injured with severely damaged fingers and the eyes received fragments.
- 11:10 Preliminary accident report made to Head Office.
- 12:02 Medics with injured deminer move towards Dushanbe city.
- 14:53 Medics with injured deminer arrive at the minefield Shoun base #5. They make bandaging, injection and after that they will move on to Dushanbe.
- 16:35 Medic team arrives in Kulob city and report the situation of the injured deminer as satisfactory.
- 17:00 - 21:30 Doctors from Qariya-Bolo hospital are informed and gathered for support
- 21:30 Deminer casualty arrives at the Hospital in Dushanbe and first aid is given.
- 22:00 Deminer casualty as taken to the doctor for general medical investigation.
- During the discussion with the head of the Demining team #4, it was found that the de-miner [the Victim] after break-time moved toward [another deminer] to replace him. He was searching the lane without wearing his face protection. At the same time the head of team #4 and other deminers were working in the field.

[The Victim] took a detector and identified a signal and without wearing the visor started excavation with small shovel to find signal. At 08:10 the explosion happened and the victim was thrown back from the line of the operation. The head of team ordered to take the deminer out from the field. The stretcher was brought to injured de-miner by [Name removed] and [six names removed] and they took the injured to the doctor at 08.20. The doctor provided first aid at 08.22 hours and they moved toward ambulance. They arrived at 08.50 in front of the ambulance and provided relevant medicine. At 08.55 the Ambulance moved to the district hospital of Darvoz.

During medical operation, the following three people were accompanying the victim:

- [Demining group] medical coordinator [Name removed].
- Doctor GB 4 [Name removed]
- One person from the team who had the same blood group.

FAILURE/MISTAKE

As a result of the investigation, it was identified that that due to the unprofessional and negligent behaviour of the head of team #4 and not following the SOP, the deminer [the Victim] entered to the hazardous area without wearing the face visor. As a consequence of not following of the SOP, the deminer suffered extreme injury in the accident.

The list of the people who provided first aid at the day of explosion according to the below plan in the mine field (annex)

Investigation in the explosion area



Visor located 1,5 m from the accident place at 3000

Basestick located 40 cm from the accident place

Detector located 35 cm from the accident place

[A collection of large and small rocks was shown in other photographs.]

CONCLUSION

1. The group was given the assignment as part of the ongoing mine clearance project of [Demining group] for mine clearance in the Darvoz districts, GBAO.
2. The minefield where the demining group was conducting mine clearance operation is considered a high level risk by [Demining group] and TMAC.

3. [The Victim] graduated from the Russian Military Institute and he worked as a teacher at the Tajikistan Military Institute. Based on Tajikistan Mine Action Centre's (TMAC) request letter dated on 19 March 2010 and according to the Ministry of Defence of the Republic's decree No.101 in March 31, 2010, he was seconded to the TMAC. [TMAC then assigned him to work with the demining group.] In [Demining group] [the Victim] had been working as a deminer and become highly experienced. He had sufficient knowledge on demining equipment and had participated in many demining training courses and received certificates.

4. This accident occurred due to the negligence and lack of control of the head of team #4, who had confidence in the skills of the deminer. The deminer disregarded the safety rules and failed to act in accordance with SOP.

5. The protective apron prevented the body of the [the Victim] from receiving injuries. Perhaps, if [the Victim] had on the protection mask, he would not have received severe physical injuries on his face.

6. This was an anti-personnel mines PMN-2 reinforced with an ML-7 anti-lift device. During the searching for the signal using a small shovel [long trowel], the explosion occurred.

RECOMMENDATIONS

After the accidental explosion of this mine, it is recommended that conducting refresher training to this team (and including other demining teams) be conducted in order to ensure that this kind of the mistake will not be repeated.

When the deminer hears a strong signal from the detector, he should immediately report to the international consultant or head of the team.

International consultants and the heads of the teams should be in the area of the operation during the entire working time.

In all demining teams, the appointment of a deputy head of team is recommended due to the large working area in some parts which makes it very difficult to control deminers.

During the mine clearance activity in the field, the head of the team should have the authority to replace deminers. No one should take their place without permission of the head of team.

During working times, the heads of the teams should not be using mobile phones except to take calls from the demining group country office. If this occurs, the deminers who are working in their field should move out from the field before he communicates by phone. No deminers should have a cell phone with them during clearance in the minefield.

Victim Report

Victim number: 1005	Name: [Name removed]
Age:	Gender: Male
Status: supervisory	Fit for work: no
Compensation: Not made available	Time to hospital: 85 minutes
Protection issued: Frontal apron; Long visor	Protection used: Frontal apron; Long visor

Summary of injuries: minor Arm; severe Arm; severe Eye; severe Face; severe Hand
AMPUTATION/LOSS: Eye; Finger

COMMENT: See Medical report.

Medical Report

No formal medical report was made available. Photographs show injuries to the left hand and arm, also injuries to the face with dressings over the eyes, nose and mouth and a deep cut on the left shoulder.



In a telephone interview in November 2015 the Team Leader reported that the victim lost one eye completely and lost 70% of the vision in the other. He also lost one entire finger and has severe damage to others.

Analysis

The primary cause of this accident is listed as a "Field control inadequacy" because the Victim was working without wearing his face protection and the error was not corrected. The secondary cause is listed as "Victim inattention" because it seems that Victim simply forgot to put on the visor. There appear to have also been significant "Management Control Inadequacies because the list of recommendations include things that should already have been in force. These include the need for supervisors to be present in the operations area at all times while work is being conducted and stress the need for supervisors not to be busy using mobile telephones during work hours: this may imply that the supervisor was out of the working area and talking on his mobile at the time of the accident.

There is some inconsistency in the record of timings in the report. The time taken for the deminer to reach the ambulance is explained in photographs showing the steep mountain paths common in Tajikistan. The Victim had to be carried for more than thirty minutes before reaching the ambulance and starting his road journey.

The Victim's left hand was injured and a broken trowel was shown in photographs. The victim's hand tool included a handguard which was not shown in the photographs. The injuries to his left hand and arm imply that he was using two hands on the tool, with the right gripping the trowel handle and the left pushing on the blade (often seen). Unfortunately it is not recorded whether the Victim is left or right handed.

The investigation is considered inadequate because no effort was made to determine why the explosion actually occurred. It appears probable that it occurred because too much force was applied using a two-handed excavation technique. The inclusion of identical statements also raises questions of credibility in a report conducted by the demining group itself.