

# DDAS Accident Report

## Accident details

<b>Report date:</b> 12/08/2016	<b>Accident number:</b> 803
<b>Accident time:</b> 10:10	<b>Accident Date:</b> 03/11/2008
<b>Where it occurred:</b> TS TM 31 Bavarni Tor - MF 3 Khumroghi Tor, Vanj District, Panjshanbeobod	<b>Country:</b> Tajikistan
<b>Primary cause:</b> Management/control inadequacy (?)	<b>Secondary cause:</b> Inadequate training (?)
<b>Class:</b> Handling accident	<b>Date of main report:</b> 08/11/2008
<b>ID original source:</b>	<b>Name of source:</b> TNMAC
<b>Organisation:</b> [Name removed]	
<b>Mine/device:</b>	<b>Ground condition:</b> grass/grazing area; hard; steep slope
<b>Date record created:</b>	<b>Date last modified:</b> 12/08/2016
<b>No of victims:</b> 2	<b>No of documents:</b> 2

## Map details

<b>Longitude:</b>	<b>Latitude:</b>
<b>Alt. coord. system:</b>	<b>Coordinates fixed by:</b>
<b>Map east:</b> E 071° 21' 08.87"	<b>Map north:</b> N38° 16' 55.29"

## Accident Notes

inadequate training (?)  
inadequate training (?)  
safety distances ignored (?)  
request for long handtool (?)  
visor not worn or worn raised (?)

## Accident report

This report was made available as scattered files, the longest of which is awaiting translation from Tajik to English. The report will be adjusted when that has been achieved. Text from the other files has been merged into the following. Some of the formatting and pictures have been removed. The substance of the report is reproduced below, edited for anonymity. Text in square brackets [ ] is editorial.

### Internal Demining group accident report

On the day of the mine accident, six MDD teams were deployed and controlled by three Set Leaders and [Victim No.2] as MDC Supervisor. Due to the entire task setup, three MDDs worked in one Set on two different spots of the minefield 31/3.

One MDD Set was responsible to prepare a 2m wide safety lane surrounding of the PFM 1S contaminated drop zone. The second Set made a 2m wide cross through the minefield for a better access for the ops. teams. Both Sets were approx 250m away from each. Therefore, the safety distance was guaranteed.”

During the field Ops. November 3rd and till the time of the accident, 2700 meters square been reduced by MDDs and 136 PFM 1S were indicated.

Regarding the practical experience, such mines were always safely collected from the minefields and passed into collection pit. So, happened as well on the day of the accident.

[Victim No.1], Set Leader, collected the indicated mines from his Set area to the collecting pit approx 30m away from the field Ops. When he lies down the last PFM, the explosion happened. Fortunately, [Victim No.1] was during the blast of the mine not in the squat but in the right up position.

[Victim No.2] was during this action about 1,5m on the left side behind [Victim No.1]. Because of the distance to and the position to the mine blast, both of them became slightly and treatable injured.

[Victim No.2] did not wear a visor. He ignored the safety regulations of [Demining group] and was as a supervisor a negative example for the whole de-mining team. Therefore, [Victim No.2] received a written warning.

The spring of the striker removed from Victim No.1's right calf by the surgeon.

### **Recommendation for the further handling of PFM mines**

The PFM mines where the thicker wing been destructed and the liquid explosive is obviously out, those PFM mines should be collected and pass in a proofed pit store until the demo. The transport of those mines just on the thin wing and careful the metal part in the mid of the mine is the fuse system and contains a few g explosive too.

PFM mines where the thicker wing (explosive contained) is still in a proper shape, shall be marked of and destruct in situ take place. Don't touch those mines or move!!!!

If MDD operation is going on in the certain minefields, the destruction of those “healthy” PFM mines take place Later, by the end of the Ops. day. Or by using special devices (tyres etc.) to avoid they add contamination of the area.

Note: JUST BY AN EOD QUALIFIED PERSON OF [Demining group].

Or using a tool Like a box with a long handle which is on the opposite of the de-miner open, so the mine could push into that box for a safety handling.

### **Investigation by the MAC**

[The report has not been translated yet and the following is gathered from those parts in English and from the photographs included.]

The accident occurred in a hazardous area high in the mountains. The demining group involved was searching the area with two mine dog teams and collecting discovered devices, moving them to a collection area. When the field supervisors went to count the discovered mines, the last collected item exploded, resulting in minor injuries to both supervisors.

The area was contaminated with aerielly scattered PFM mines.



The picture shows the site of the accident. Collected PFM mines and collected scrap (largely from the dispenser) have been collected in an unmarked area that has not been prepared. The munitions have not been placed in an orderly way.



This picture shows what the area looked like before and after the investigation.

According to the International Supervisor's statement [Victim No.2], two supervisors went to the collection area to count the collected mines and the detonation occurred. Victim No.1 was counting and may have been obliged to move the heap to count accurately. Victim No.2 was 1.5 metres away (without face protection) when the detonation occurred. According to the demining group's internal report above, [Victim No.1] was placing the mine in the collection area when it detonated.

Victim No 1 was a Mine Dog set leader. Victim No.2 was an International Supervisor.

The accident occurred at 10:10 (or 10:15 depending on source). Victim No.2 stopped operations and called for Victim No.1 (with a serious injury to his leg) to be helped to the ambulance.

Photographs show that the injuries were to the front and side of the victims and marks on their frontal body armour show that the armour protected them against multiple small fragment strikes. No pictures of Victim No.1's visor were included and it is presumed that he was wearing it because his failure to do so is not noted.

Evacuation required transit down a steep zig-zag mountain track before reaching the ambulance.

## Victim Report

<b>Victim number:</b> 999	<b>Name:</b> [Name removed]
<b>Age:</b>	<b>Gender:</b> Male
<b>Status:</b> supervisory	<b>Fit for work:</b> yes
<b>Compensation:</b> Not made available	<b>Time to hospital:</b> 65 minutes
<b>Protection issued:</b> Frontal apron; Long visor	<b>Protection used:</b> Frontal apron; Long visor

**Summary of injuries:** severe Leg

COMMENT: Photograph showed a large injury to the right leg with minor injury above. No medical report currently available.

## Victim Report

<b>Victim number:</b> 1000	<b>Name:</b> [Name removed]
<b>Age:</b>	<b>Gender:</b> Male
<b>Status:</b> supervisory	<b>Fit for work:</b> yes
<b>Compensation:</b> Not made available	<b>Time to hospital:</b> 65 minutes
<b>Protection issued:</b> Frontal apron Long visor	<b>Protection used:</b> Frontal visor; Long apron

**Summary of injuries:** minor Face, minor Legs

COMMENT: Photographs showed more than a dozen light injuries to legs and injuries above, below and beside the right eye. No medical report currently available.

## Statements

Dated 03/11/08 by Victim No.2, field supervisor. [Handwritten in English.]

I woke up at 05:30 a.m. in the morning. We had breakfast at 06:15. We left the camp at 06:30 together with all MDD staff. We arrived to the top of the minefield at 07:15 a.m. We had fifteen minutes break. After break [Victim No.1] made safety briefing to all. Then the ops started at 07:30. I supervised both sections from the safe place located in the middle of both sections. The ops was going on normally in the field. But the area has spiky grass as well. [Victim No.1] told me he said we collected PFM mines from the field, I need to count them. The time was 10:10 a.m. [Victim No.1] started counting them. I went nearby. I was 1.5 metres away from the place where the mines were stored. Total number of mines were 46. The last mine blast in its place at 10:15 a.m. I injured under right eye and both legs as well. All the injuries were slight. Then I stop the ops and call to the deminers and dogs handlers to stop ops and help [Victim No.1] to bring him to ambulance. I came by myself to the ambulance and doctor took us to Vanj Hospital. We arrived at 11:15 a.m.

**As conclusion.** When we arrived to hospital we had x-ray. After x-ray there was no problem and we got treatment in local hospital of Vanj. At the moment our health is good.

Signed: [Victim No.2] Field supervisor

## Analysis

The primary cause of this accident is listed as a "*Management Control Inadequacy*" because the senior international supervisor present had not ensured that the mine collection area was appropriately prepared and marked and was not wearing PPE correctly. The management who had appointed him had not ensured that he knew or would enforce the demining group's own SOPs and basic safety standards. The secondary cause is listed as "*Inadequate training*" because it seems that both supervisors did not understand the dangers of piling live mines in an untidy collection area. It is surprising that only one mine detonated, and it was lucky that Victim No.2 was not struck in the eye by the fragments that struck his face.

The information currently available is internally contradictory. Victim No.2 stated that he was watching as Victim No.1 counted mines. The Internal demining group report states that Victim No.1 was delivering a mine to the pit while Victim No.2 stood by. It is possible that he was both delivering a mine and counting those already collected. Photographs showing an untidy pile of mines that needed to be counted imply that Victim No.1 may have been levelling or moving the mines to count them (perhaps using a stick) when the accident occurred. Alternatively he may have been delivering another mine but the lack of injury to his hands implies that they were not in the direct vicinity of the blast, so he may have thrown it onto the pile.

The mine was identified (from others in the same dispersal) as a PFM 1S, which is supposed to self-destruct after a set period (reported to be 40 hours). That mechanism did not work but after "gagging" it may be especially sensitive to any movement (rather than the pressure that is usually required to squeeze the liquid explosive and initiate the firing mechanism). In any case, the number of live mines collected implies that the self-destruct feature is very unreliable.