

# DDAS Accident Report

## Accident details

<b>Report date:</b> 29/01/2008	<b>Accident number:</b> 484
<b>Accident time:</b> 11:03	<b>Accident Date:</b> 04/06/2007
<b>Where it occurred:</b> Bagram, Kabul Province	<b>Country:</b> Afghanistan
<b>Primary cause:</b> Inadequate equipment (?)	<b>Secondary cause:</b> Management/control inadequacy (?)
<b>Class:</b> Excavation accident	<b>Date of main report:</b> Not recorded
<b>ID original source:</b> None	<b>Name of source:</b> UNMACA
<b>Organisation:</b> [Name removed]	
<b>Mine/device:</b> PMN AP blast	<b>Ground condition:</b> building rubble hard
<b>Date record created:</b>	<b>Date last modified:</b> 29/01/2008
<b>No of victims:</b> 1	<b>No of documents:</b> 2

## Map details

<b>Longitude:</b>	<b>Latitude:</b>
<b>Alt. coord. system:</b> Not made available	<b>Coordinates fixed by:</b>
<b>Map east:</b>	<b>Map north:</b>
<b>Map scale:</b>	<b>Map series:</b>
<b>Map edition:</b>	<b>Map sheet:</b>
<b>Map name:</b>	

## Accident Notes

handtool may have increased injury (?)  
inadequate equipment (?)  
use of pick (?)  
visor not worn or worn raised (?)  
squatting/kneeling to excavate (?)

## Accident report

The report of this accident was made available in August 2007 as a PDF file. Its conversion to a text file for editing means that some of the formatting has been lost. The substance of the report is reproduced below, edited for anonymity. The original PDF file is held on record. The

record made available is a "Lessons Learned" document and not the full BoI report. This record will be amended if the full report is made available later. Text in [ ] is editorial.

## **LESSONS LEARNED SUMMARY**

DEMINEING ACCIDENT ON DEMINER OF [International demining NGO] AT BAGRAM

DATED 04 JUNE 2007

### **INTRODUCTION:**

1. As a result of a mine accident on 04 June 2007, an investigation team from AMAC Kabul comprising [Name removed] (Quality Management Assistant (QMA)) and [Name removed] (OPS Associate), conducted the investigation in accordance with UNMACA Standard Working Procedures.
2. The accident involved a deminer of [International demining NGO], MU-03, named [the Victim]. The deminer received very severe injuries to both eyes resulting in permanent blindness and his right arm (above elbow joint) was amputated.

### **SUMMARY:**

3. On 04 June 2007 at 1103 hrs while the deminer was working in his clearance lane, his trowel struck the top of a PMN anti personnel mine, causing the mine to detonate. During the accident his visor was not worn. This lack of face protection caused the serious injuries to his eyes. The accident occurred near a corner of a ruined mud wall. The mud wall over a period of time had gradually disintegrated and fallen on ground surface, thus increasing the ground depth over the mine. The ground depth reached 70 cm at the accident point; the deminer had failed to remove this additional soil above original surface of the ground.
4. The distance from the accident point to the hospital where deminer was admitted is 5 km; it took 20 minutes to convey the injured deminer.

### **CONCLUSIONS:**

5. The investigation team concluded that the accident occurred because of the following reasons:
  - The deminer failed to remove the extra soil from original surface of the ground and then clear to 15 cm depth.
  - The deminer was working directly over centre of the located signal.
  - The deminer was working with appropriate hand tools and was dressed with PPE, but his visor was not worn therefore, his face received multiple injuries.
  - Structure of the team: 1 team leader, 1 assistant team leader and 6 deminers, but 3 deminers of this team were shifted to [International demining group] DT-42. Team leader and assistant team leader failed to control remaining 3 deminers and prevent them from practicing incorrect drills.

- The lack of some key command and basic strategies were contributing factors to the accident, if the basic rules and standard working procedures are adhered to, accidents of this nature will be minimised.

## RECOMMENDATIONS:

6. The following points are to be considered:
  - When deminers are working on an area on which sediment soils have been accumulated, they must firstly remove the accumulated soil from the original ground surface and then clear to 15 cm depth.
  - Command group should strictly control the deminers and not permit incorrect drills and procedures, ensuring that they are working in accordance with set procedures and SOPs.
  - Team is to ensure that the accident site remains secured in its original shape until Board of Inquiry is completed.
  - Site supervisors are to inform their relevant offices as soon as possible after the accident occurs and then the AMAC office by telephone or CODAN radio to investigate the case immediately.

Signed: Chief of Operations, UNMACA Kabul

## Victim Report

<b>Victim number:</b> 647	<b>Name:</b> [Name removed]
<b>Age:</b>	<b>Gender:</b> Male
<b>Status:</b> deminer	<b>Fit for work:</b> no
<b>Compensation:</b> Not made available	<b>Time to hospital:</b> 20 minutes
<b>Protection issued:</b> Short frontal vest Long visor	<b>Protection used:</b> Short frontal vest, Visor worn raised

### Summary of injuries:

AMPUTATION/LOSS: Eyes

Arm Above elbow

COMMENT: No Medical report was made available.

## Analysis

The trowel used by this International demining NGO may have been a short “mattock”, which they often call a “trowel” without explanation. Their mattock has featured in many accidents because it is difficult to use without considerable force. Its use is fast, but makes initiation more likely, especially of mines with pressure plates that extend over the entire top surface of the mine (as detailed in the GICHD Manual Demining Study 2005). From records in this database it can be seen that the mattock has caused severe injury when the head breaks off

and strikes the user. The deminer's arm loss in this accident may be a case in point. An example used by this International NGO in another country is shown below.



Alternatively, the tool may have been some kind of builder's trowel, which is also not a safe tool, breaking all of the design requirements for a blast resistant tool and failing to meet the recommendations in the IMAS. They are not designed for purpose, not designed to protect the user's hand and not designed to stay in one piece in a blast.

The primary cause of this accident is listed as "Inadequate equipment" because the inappropriate design of tools makes initiation more likely. The fact that this has been known for many years but not recognised by the management of the International demining NGO involved in this accident is the reason that the secondary cause is listed as a "Management control inadequacy". The NGO's failure to ensure that the field supervisors enforced the correct wearing of the visor is another management control inadequacy.