

DDAS Accident Report

Accident details

Report date: 23/01/2008	Accident number: 503
Accident time: 08:45	Accident Date: 15/11/2006
Where it occurred: MF-2002/168-337, Injeel District, Herat City, Herat Province	Country: Afghanistan
Primary cause: Field control inadequacy (?)	Secondary cause: Management/control inadequacy (?)
Class: Excavation accident	Date of main report: 22/11/2006
ID original source: 01/03/031/502/06	Name of source: UNMACA
Organisation: [Name removed]	
Mine/device: PMN AP blast	Ground condition: grass/grazing area metal fragments soft wet
Date record created:	Date last modified: 23/01/2008
No of victims: 1	No of documents: 2

Map details

Longitude: 64° 14' 15"	Latitude: 34° 21' 52"
Alt. coord. system: 62 14 51.5: 34 21 52.4	Coordinates fixed by: GPS
Map east:	Map north:
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

handtool may have increased injury (?)
inadequate metal-detector (?)
inconsistent statements (?)
long handtool may have reduced injury (?)
metal-detector not used (?)
squatting/kneeling to excavate (?)
use of shovel (?)

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. Text in [] is editorial.

Initial letter

Details of Accident

At 8:45hrs on Wednesday the 15th November 2006 [National demining agency] MCT-8, a deminer was involved in an accident at Division 17th MF-0337 east of Herat City.

The accident occurred while the deminer was prodding/excavating. [The mine was a PMN AP mine.]

Injuries to the victim deminer occurred when he was using a bayonet or shovel during operations

Mr. [Name removed] Assistant team leader led the team as the team leader Mr. [Name removed] was on leave. The injured person received first aid and was evacuated to Herat public hospital under the care of Dr. [Name removed], [National demining agency] Medical Officer Herat.

A copy of the [National demining agency] situation report submitted by Mr. [Name removed], [National demining agency] Field officer is attached at Annex A.

Injuries

As a result of the explosion the deminer received minor injuries to his left hand and crush injuries to his left arm plus a single wound (1 to 1.5cm) to his left thigh where a foreign body penetrated the muscle. The [National demining agency] doctor indicated this object to be a small stone. These injuries indicate that his left hand was close to the point of detonation and he was facing sideways to allow the foreign object to pass under his protective vest. This is not consistent with proper use of the prodder but could be said to be consistent if sitting or kneeling sideways using a shovel in a sweeping motion?

Cover letter

File:/01/03/031/502/06

To: Chief of Operations, UNMACA Kabul

Cc: deputy TQM Specialist in UNMACA

From: Area Manager AMAC Herat

Date: 27 November 2006

Sub: [National demining agency]/MCT-8 Demining Accident Investigation Report

Please find attached the investigation report for Demining accident, which was occurred upon a deminer of [National demining agency]/MCT-8 on 15 November 2006 in MF No-20/2002/168/0337 located in division-17, Injeel district of Herat province.

AMAC HERAT INVESTIGATION ON MINE CLEARANCE ACCIDENT

AT 17th DIVISION-MF-0337, HERAT ON 15TH NOVEMBER 2006

Investigation conducted by [Name removed], Area Manager Herat, [Name removed], Operations Associate and [Name removed] Quality Management Assistant Herat.

To: Chief of Operation UNMACA, Kabul

From: UNAMAC Herat, Western Region.

Report submitted: 22 November 2006

Background history of the Division 17th and MF-337:

The 17th Army Division base is about 5 square kilometres and is located approximately 3km east of the city. The Division lies on the southern side of a series of hills running east west and is the northern border to the city. The area contains numerous valleys and spur lines. There are no maps or aerial photographs available of the base.

In October and November 2001, Coalition Forces bombed Taliban munition stockpiles throughout Division 17th. The stockpile were targeted to deny Taliban Forces the opportunity to use the Ordnance against Coalition Forces, however, some of the stored ordnance was thrown out of the structures and scattered over large areas of the Division. The team is responsible for collecting ammunition and handing over to EOD teams. A backhoe from [Other national demining NGO] is also in support and has been used to clear access routes into the minefield to the destroyed bunkers.

During the Russian invasion in Afghanistan large quantities of ammunition were stored in this valley of the 11th Artillery Garrison inside Division 17th and was protected by a belt of AP mines, which are currently being cleared by [National demining agency] MCT-8.

The MF-0337 was surveyed on 02 June 2005 with a total area is 82,310 sqm and on Dec 2005 the MF was tasked to [National demining agency]. They have found and destroyed 189 AP mines and 24,813 UXO during clearance.

MINE ACCIDENT AT 17th DIVISION MF-NO-337

References:

- A. Afghan Mine Action Standards (AMAS)
- B. Initial Incident report [National demining agency]

SUMMARY

Organisation: [National demining agency]

Team: MCT-Team-08

Supervisor: [Name removed]

Location: Division 17th Injeel District, Herat

Date/Time: 8:45am, 15th November 2006

Deminer's Injuries shown below.



Site conditions: The accident occurred on a hillside with soft, wet soil. The weather was clear, calm and mild. The vegetation was “rocky, grass”.

The site consists of a 35/40-degree slope with terraces cut into the slope at regular intervals. The accident occurred on the uphill side of one of the terraces very close to the flat ground of the terrace. The area shown in the photograph below is a known mine belt that stretched for many hundreds of metres in both directions into a small valley and extends around the other side of the valley as well.

The soil is soft and spongy from recent heavy rain and contains small rocks and stones. There is extensive evidence of erosion, which has helped to reshape the terraces with deposits from above. The investigating team believe the mine was buried deeper than normal because of accumulated soil.

This picture shows the accident site, the location of the detonation and the terrace.





These photographs show the edge of the initial excavation of 130mm. [The point of initiation appears to be well inside the cleared area.] It is possible the deminer was using the shovel to speed up clearance and used it as a digging tool? Why he would do this is a mystery as all members of this team were experienced with this site and knew that mines had been found elsewhere at greater depths.

Equipment

The victim deminer was wearing his PPE correctly during operations and has saved him from serious major injuries.

At the time of the accident the investigating team were in an adjoining minefield and arrived on site 10 minutes after hearing the explosion. At that time the investigating team noticed that the equipment had been removed and during further investigation found that the deminer's tools, being a long bayonet and small shovel (entrenching tool) were missing.

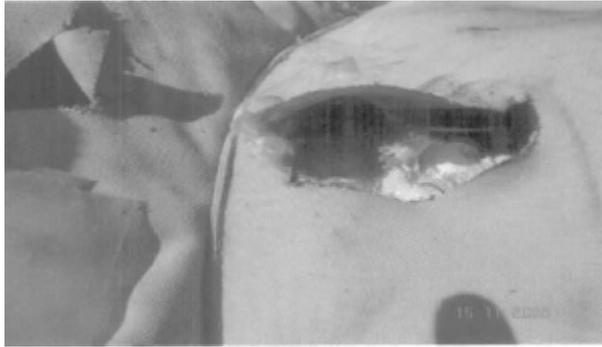
Team command staff could not account for the lack of equipment and suggested that the prodger is probably somewhere else in the minefield? All uncleared areas of the minefield can easily be seen and there is NO evidence of any tool. The lack of tools at the accident site is mystifying as he supposedly set the mine off with one of the items, and it should have been close by, but both are missing! The investigating team conducted a check of equipment and found the team to be deficient one prodger and one shovel. The team leader could not explain this situation. The investigating team believe the site was tampered with before our arrival.

The investigating team observed broken Bakelite pieces of a PMN mine at the accident site.

According to the team command group the section leader was about 100 meters from the accident point at the time of the accident. This places him on the other side of the valley. Even so, he had excellent observation with all the deminers and should have seen any improper procedures easily.

The accident has occurred while the deminer was excavating. The soil condition in this minefield is high fragmentation and full excavation is necessary. The accident occurred during this excavation process but the investigating team is unable to determine if it was caused by bayonet or shovel as both are missing? It is possible that the mine was detonated by the shovel being used as an excavation tool, instead of its proper role in cleared soil removal.

[The picture below shows damage to the body armour. This must have been struck by a sharp edge.]



Team member Statements:

The investigation team was unable to take a written statement from victim deminer, because he is illiterate. He was also unable to talk to the investigators as he was suffering from hearing loss and could not hear any questions given to him.

The statements of those involved are attached at ANNEX B and should be read before proceeding.

Conclusions

The accident was caused by human error.

The accident occurred by incorrect use of either the bayonet or the shovel.

Command staff and other team members may have tampered with the site and removed evidence. Command and control at the site was poor.

Recommendations

All [National demining agency] deminers are to undergo refresher training on the correct use of tools.

All [National demining agency] command staff undergoes refresher training on their roles and responsibilities.

All [National demining agency] staff undergoes refresher training on securing an accident site.

[National demining agency] conduct an internal investigation regarding the accident site being tampered with and report to Chief of Operations UNMACA with the findings and any disciplinary actions to be taken within two weeks of this report being submitted.

[National demining agency] initial report letter

To: AM UNAMAC Western Region

From: Field officer of [National demining agency] in Herat

Date: 15/11/2006

Sub: Mine accident Report

Hereby we would like to state that on 15/11/2006 at 08:45AM ME No-AF-2002-168-MF-337 located in Shater village District, Injil Province Herat at Team No-08, Section No-03 by the name of [the Victim] Deminer injured in Mine accident and the injuries of patient is as below;

1. Left arm Lateral Crush injury by the wide and height of 5*6cm.
2. Left thigh 1*1 cm closed injury from entering foreign body
3. The Patient has suffered from Hearing Problem of both sides
4. The Patient has referred to the General Public Hospital of Herat
5. General condition of patient is satisfactory.

Victim Report

Victim number: 664	Name: [Name removed]
Age: 38	Gender: Male
Status: deminer	Fit for work: not known
Compensation: Not made available	Time to hospital: 15 minutes
Protection issued: Long visor Frontal apron	Protection used: Frontal apron, Long visor

Summary of injuries:

minor Hand

minor Hearing

severe Arm

severe Leg

COMMENT: See Medical report.

Medical report

No formal Medical report was made available. The IMSMA report was not translated.

From the investigation:

“As a result of the explosion the deminer received minor injuries to his left hand and crush injuries to his left arm plus a single wound (1 to 1.5cm) to his left thigh where a foreign body penetrated the muscle.”

DoB 1968

The Victim reached the first medical facility at 09:00 – Herat civilian hospital

“...the injuries of patient is as below;

1. Left arm Lateral Crush injury by the wide and height of 5*6cm.
2. Left thigh 1*1 cm closed injury from entering foreign body
3. The Patient has suffered from Hearing Problem of both sides
4. The Patient has referred to the General Public Hospital of Herat
5. General condition of patient is satisfactory.”

STATEMENTS

Statement and Witness Report 1: deminer

Date: 15 Nov 2006

Question-1: What demining equipments are you using for excavation in the field please explain it?

Answer-1: Accordance to the procedure we are using prodding for excavation.

Question-2: How many mines did you find in the minefield?

Answer- 2: Our party still has been found and destroyed 60 antipersonnel mines successful.

Question-3: What was the cause of the accident?

Answer- 3: The cause of the accident was that probably the mine position changed or more soil come up over on top of the exploded mine. The victim deminer excavated the signal point with 13 up to 20 cm and he thought no mine available and used prodder/shovel faster it was victim deminer fault and caused accident.

Question-4: What is your recommendation for preventing of such accident?

Answer-4: I have recommended that, since six month our duty in Herat, and during mission leave travel form Herat to Kabul by road, thieves have stolen our money and we are worry about that. (Stressful work + Stressful life)

From beginning of the task up to date our section has been working in mine belt, we request you to consider the turn and other sections should take part in mine belt. The mines are deeper then 13 or 20 cm in some place, I recommended that almost the deminers should work carefully.

Statement and Witness Report 2: Section Leader

Date: 15 Nov 2006

Question-1: What demining equipments are using in your section for excavations in the field please explain it?

Answer-1: Section No-3 of tern No-8 are using the below equipment:

MIL-D-1 mine detector, PPE, Prodder, Shovel, Rope, Markers, Ground sheet, marking stick, tripwire feeler, gloves and backhoe if necessary.

Question-2: Which equipment are using by your section deminer for excavation?

Answer- 2: Our section deminer almost using prodder with support backhoe.

Question-3: What was the cause of the accident?

Answer- 3: The cause of the accident was that probably more soil come up over on top of the exploded mine, the victim deminer excavated the signal point in fact the exploded mine was 40 cm. Probably and it was victim deminer fault/neglect and caused accident.

Question-4:

How did you know the exploded mine was deeper than 15cm?

Answer-4: Because the mine was located inside the stream where mine was exploded form both side of stream more soil come down top of the mine.

Statement and witness report 3: Assistant Team Leader

Date: 15th November 2006

Question-1: What did you do when the accident took place?

Answer-1: I was briefing and explained the safety procedures before starting of practical work and have told to deminer who are working in the mine belt take care. I was controlling the section No-2 and called to team medic and placed him closed to section No-3 because they have worked in the mine belt.

Question-2: What demining equipments are using in your team for excavations in the field please explain it?

Answer- 2: As you know this minefield is continually gives signal and we are excavating the area by bayonet and for removing of soft soil using shovel.

Question-3: What was the cause of the accident?

Answer- 3: The cause of the accident was that probably more soil come up over on top of the exploded mine, the victim deminer excavated the signal point in fact the exploded mine was deeper then 13cm probably and I informed all deminers may some of the mine is deep take care.

Question-4: What is your recommendation about such accident?

Answer-4: The deminers are should be considered team leader, Assistant Team Leader and section leader advice in the minefield it is enough for them.

Analysis

The crush injury to the Victim's arm and the cut into his body armour were caused by a large object hitting both. The part that hit the armour was sharp. These facts lead to the conclusion that the Victim was using his shovel at the time, as was admitted in one of the statements.

The primary cause of this accident is listed as "Field control inadequacy because the Victim was working in breach of his SOPs and his error was not corrected. The field controllers compounded their error by concealing the tool that was in use. The investigators identified a contributory cause to be inadequate training, which is a management responsibility. The demining group's senior management are responsible for the appointment and training of their field controllers, so the secondary cause is listed as a "Management control inadequacy".