

4-19-2007

DDASaccident510

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AID

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DDAS Accident Report

Accident details

Report date: 25/01/2008	Accident number: 510
Accident time: 08:10	Accident Date: 19/04/2007
Where it occurred: MF # 0337, Div- 17, Qala-e-Shater, Injeel District, Herat Province	Country: Afghanistan
Primary cause: Inadequate equipment (?)	Secondary cause: Unavoidable (?)
Class: Excavation accident	Date of main report: 24/04/2007
ID original source: QM/10-02	Name of source: UNMACA
Organisation: [Name removed]	
Mine/device: PMN AP blast	Ground condition: rocks/stones
Date record created:	Date last modified: 25/01/2008
No of victims: 1	No of documents: 2

Map details

Longitude:	Latitude:
Alt. coord. system:	Coordinates fixed by:
Map east: E= 062 14 47.2	Map north: N= 34 21 45.71
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

inadequate investigation (?)
long handtool may have reduced injury (?)
inadequate equipment (?)
metal-detector not used (?)
squatting/kneeling to excavate (?)
use of pick (?)

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.

Cover letter

File: OPS103101-34

Date: 29 May, 2007

To: See Distribution List

From: Chief of Operations UNMACA, Kabul

Subject: Investigation Reports & Lessons from the [National demining agency] DT # 5 Demining Accident

Please find attached the investigation report and lessons learned from the mine accident, which was happened on a deminer of [National demining agency] DT # 5 at MF # 337, Div-17, Injeel district of Herat province on 19 April 2007.

Distribution List: Complete Investigation Report to: [National demining agency]

Lessons Learned to: [All demining groups in-country.]

LESSONS LEARNED SUMMARY

DEMINING ACCIDENT [National demining agency] DT # 5, HERAT, DATED 19 APRIL 2007

INTRODUCTION

1. As a result of a mine accident on 19 April 2007, the investigation team from AMAC Herat comprised of [Name removed] the Operations Associate and Acting Area Manager and [Name removed] the Operations Assistant conducted an investigation in accordance with UNMACA Standard Work Procedures.
2. The accident involved a deminer named [the Victim] from [National demining agency] DT - 5. In result of the accident, the deminer received some minor injuries to his right arm, index finger and front neck.

SUMMARY

3. [National demining agency] DT — 5 started normal clearance on 19th April 2007 in Minefield # 2002/168-337, at 08:10 AM a demining accident took place and in result was deminer injured. He subsequently received treatment at site by team's medic and was evacuated to ANA hospital located in Zafar Qol- Urdo (ANA Corps # 207) located about 40 Kilometres from the centre of the city.

CONCLUSIONS

4. The investigation concluded that the accident has happened because of the following reasons:
 - a) Poor Command and Control by the team's command group
 - b) Incorrect use of mine clearance equipment
 - c) Carelessness of the deminer himself

RECOMMENDATIONS

5. The following are recommended by Investigation Team

- a) The teams' command group should undergo refresher training on their roles and responsibilities.
- b) All [National demining agency] command group should receive refresher training on how to secure the accident site.
- c) Pickaxe should not be used in Mine Rows.
- d) The deminer should work only with bayonet or prodder for the excavation or removing extra soft soil.
- e) The team command group is to ensure not only the deminers using suitable demining equipment but they are also capable to use it correctly specifically in mine rows.
- f) During tasking, the command group should also ensure the capability of deminers assigned to the specific tasks.

Signed: Chief of Operations UNMACA Kabul, Afghanistan

Dated 19 May 2007

Internal Memo

File: QM/10-02

To: Chief of Operations, UNMACA Kabul

From: Chief of Quality Management, UNMACA Kabul

Date: 07 May 2007

Subject: Demining Accident Investigation Report [National demining agency] in Qala-e-Shater of Herat province

With reference to demining accident investigation report of AMAC Herat, dated. April 19, 2007. The investigation report was reviewed and concluded that the accident happened because of poor command and control by command group and carelessness of deminer.

We support the recommendation of the investigation officer and would like to add on recommendation on the suitable and proper use of excavation tools, supervision and specific training requirements for the team.

The command group shall ensure that, the suitable tools are used in a right way by deminers when working in the minefields especially in mine rows. During tasking the command group should also ensure the capability of deminers assigned to specific task.

Further training need assessment should be conducted and the team should undergo refresher training. The course should cover supervision/team management and individuals demining skills.

AMAC HERAT INVESTIGATION ON MINE CLEARANCE ACCIDENT

at Qala-I-Shater-MF-0337 Enjeel District, Herat on 19th April-2007

Investigation conducted by: [Name removed] OPS Associate and [Name removed] Operations Assistant UNAMAC Heart Western Region.

To: [Name removed] Chief of Operations UNMACA Kabul

CC: [Name removed] Deputy Quality Management Department UNMACA Kabul

From: [Name removed] Operations Assistant UNAMAC Herat Western Report submitted: 24th April-2007

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 agency] 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 [another (3rd) national demining agency] MCT-8.

The MF-0337 was surveyed on 02 June 2005 with a total area is 81,690 sqm and on 1st Dec 2005 the MF was tasked to [the (3rd) national demining agency]. They have found and destroyed 268 AP mines and 759 UXO during clearance.

On 12th April 07 the minefield No-AF-2002/17610/0337 has been suspended by [the (3rd) national demining agency] DT-17 and the mentioned tasked was hand over/briefed to [National demining agency] DT No-05. On 14th April-07 [National demining agency] DT-05 has been started the clearance activity in the mentioned task and destroyed about 10 AP mines during last 6 days.

MINE ACCIDENT AT 17th DIVISION MF NO-337

References:

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

SUMMARY

Organisation: [National demining agency]

Team: Demining Team No-05

Supervisor: [Name removed]

Location: Qala-I-Shater village Division-17th Enjeel District Hirat Province

Date/Time: 08:10 AM 19th April 2007

Incident: AP PMN Mine Explosion

Coordinates: N= 34 21 45.71 E= 062 14 47.2

Details of Accident:

On 12th April 07 the area has been suspended by [the 3rd national demining agency] DT-17 and the mentioned task was hand over and fully briefed to [National demining agency] DT No-05. On 14th April-07 [National demining agency] DT-05 has started the clearance activity in the mentioned task and discovered/destroyed more than 10 AP mines during last 6 days.

On Thursday the 19th April 2007, at 08:10 hrs [National demining agency] DT-05, a Deminer was involved in an accident at Division I 7th MF-0337 which is located east side of Herat city.

On 19th of April 2007 at 08:30 AMAC Acting Area Manager [Name removed] receives a phone call from [Name removed] [National demining agency] site officer about the accident.

On 19th April-07 at 08:10 hrs while the Deminer was excavating the area by pickaxe suddenly an anti personal mine has hit by pickaxe and exploded caused the accident and Deminer got superficial injuries on his right arm and neck. During our observation from the accident point it was seemed that the Deminer was working with pickaxe not by bayonet/prodder, because the pickaxe handle was available in the accident point.

A copy of the [National demining agency] situation report submitted by [Name removed] [National demining agency] field officer in Herat is attached at Annex A.

Injuries:

As a result of the explosion the injured Deminer received some minor injuries to his right arm, witness finger and front neck, but not very seriously. After the first aids carried out by team paramedic in the accident site, the injured Deminer was evacuated to Afghan National Army (ANA) hospital in Herat Province for further treatment. Currently the patient is discharged from the ANA hospital, the ANA hospital doctors advised him for bed rest. For the time being the injured Deminer is in [National demining agency] base camp in Herat city and he is in normal condition. During the accident the Deminer was full dressed with PPE apron and helmet visor, in this reason he has not been injured seriously. But the injured Deminer has suffered from hearing problem of both ears.



[The photograph above shows the accident side – with unusually hefty base-stick.]

[A photograph of the Victim showed right arm bandaged from wrist to shoulder. Forefinger and thumb of same hand bandaged. Bandaging on neck.

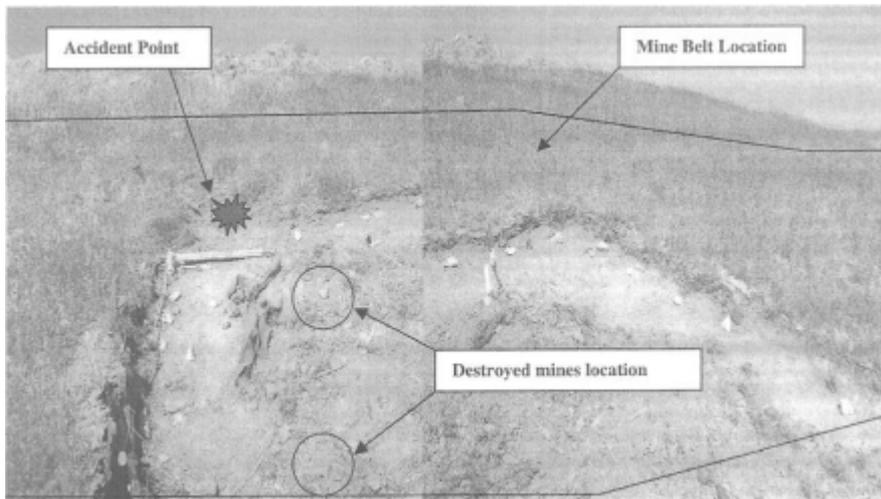
Site conditions: The terrain was described as “uneven”. The soil was “medium”. The weather was clear, calm and mild. The vegetation was “rocky, grass”.

Minefield site Information:

The accident site consists of a 60-degree slope with terraces cut into the slope at regular intervals. The accident occurred on the uphill side of one of the terraces not very close to the flat ground of the terrace. The area shown in the photograph below is a 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 medium and spongy and contains small rocks and stones. There is extensive evidence of erosion, which has helped to reshape the terraces with deposits from above. As it seems in the below picture the land surface is cut in this location the lower side of the area was cleared already during demining operations in this minefield, and now the clearance activity is going on in upper side of the cut area. This cut portion of the area was still remained unclear as an exact mine belt, as the red and white rocks are seemed in the below picture. The area is high fragmentation and needs to be full excavated.

The above picture shows the accident point and location of mine belt passed between the two-line close up to accident site. Top of picture is uphill side and the mine was laid in a mine belt about 60 degrees.



Destroyed mines location

Equipment damaged: The injured Deminer was working in the mine belt with a small pickaxe, suddenly his pickaxe was hit on a PMN Russian made mine and caused accident. During the accident the Deminer was full dressed with PPE apron and helmet visor, in this reason he has not been injured seriously.

The investigating team observed broken Bakelite pieces of a Russian made PMN mine at the accident site, and there were some fragments and small stones were hit on apron and helmet visor. The PPE apron and helmet visor are little damaged but have not been completely out of function.



A Photo of Deminer apron



A Photo of Deminer Helmet and Visor

According to the team command group the section leader was in another party about 80 meters from the accident point at the time of accident. He was placed him on the other side of the valley. Even so, he had not observation on this Deminer and should not have seen any proper procedure used by this Deminer easily.

The accident has occurred while the victim Deminer was working with pickaxe to excavate and remove the soil. The soil condition in this minefield is high fragmentation and has more slope in this location, and this accident point was also included in the mine belt passed from here and was not cleared yet.

Team member Statements:

The investigation team was able to take a written statement from victim Deminer in [National demining agency] base camp in Herat city. Actually he could not write but his statement has written by [Name removed] Assistant team leader of [National demining agency] Demining Team No-05.

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

All statements are attached and the statements have been translated from Dari to English for this report. The original Dari versions will be sent by hard copy via pouch.

Conclusions

- The accident was caused by human error.
- The accident occurred by incorrect using of mine clearance equipment in exact mine belt.
- Command and control of team leader at the site was found poor.
- Command and control of section leader at the site was found poor.

Recommendations

- All [National demining agency] command staff undergoes refresher training on their roles and responsibilities.
- All [National demining agency] field staff undergoes refresher training on securing an accident site.
- Pickaxe should not be used in mine belt.
- The Deminer should work only with bayonet or prodder for the excavation or removing extra soft soil.

ANNEX A to AMAC report

SITUATION REPORT

Army Division-17th Qala-I-Shater MF-0337, Herat

DATE: 19th April-2007

TIME 08:10 AM

LOCATION: 17th Division, MF-0337 Hirat Province. [National demining agency] CASUALTY: One

SUMMARY: [National demining agency] DT-05 has started normal clearance on 19th April 2007 in MF-No-2002/168-337, at 08:10 AM an explosion took place and one deminer was injured. He subsequently received treatment at site by team medic, and was evacuated to ANA Hospital located in QoI-I-Urdu-207 Zafar of Herat Province.

PERSONNEL DETAILS: 1. [the Victim] Deminer of [National demining agency] Demining Team No-05. Injuries:

The Deminer got superficial injuries on his right arm.

The Deminer got superficial injuries on his right hand witness finger.

Front neck crush injury but not very seriously.

The injured Deminer has suffered from hearing problem of both ears.

Victim Report

Victim number: 669	Name: [Name removed]
Age:	Gender: Male
Status: deminer	Fit for work: presumed
Compensation: Not made available	Time to hospital: Not recorded
Protection issued: Frontal apron Long visor	Protection used: Frontal apron, Long visor

Summary of injuries:

minor Arm

minor Hand

minor Hearing

minor Neck

COMMENT: See Medical report

Medical report

No formal Medical report was made available.

From the main report: "As a result of the explosion the injured Deminer received some minor injuries to his right arm, witness finger and front neck, but not very seriously. After the first aids carried out by team paramedic in the accident site, the injured Deminer was evacuated to Afghan National Army (ANA) hospital in Herat Province for further treatment. Currently the patient is discharged from the ANA hospital, the ANA hospital doctors advised him for bed rest. For the time being the injured Deminer is ...in normal condition. the injured Deminer has suffered from hearing problem of both ears."

The Victim described his injuries as:

1. Right hand arm superficial injuries.
2. Right hand witness finger superficial injuries.

3. Front neck crush injuries.
4. I have problem with my ears. I cannot listen low sound.
 - D. The Paramedic described his injuries similarly:
 - E. The Deminer got superficial injuries on his right arm.
 - F. The Deminer got superficial injuries on his right hand witness finger.
 - G. Front nick crush injury but not very seriously.
 - H. The injured Deminer has suffered from hearing problem of both ears.

STATEMENTS

Statement /witness report 1: Paramedic

Date: 19/04/2007

Question-01: Where was your location (in distance) when the accident occurred?

Answer-01: When the accident occurred I was located about 100 meters away from the injured Deminer.

Question-02: After how long you reached to the accident point?

Answer-02: I have reached after 5 minutes when the accident occurred.

Question-03: When you reached to the accident point what was the condition of injured?

Answer- 03: When I reached to accident point where the injured was located he was talking with me and he was in normal condition.

Question-04: What kind of first aids you carried out with the injured?

Answer-04: The first aids carried out with the injured Deminer as mentioned below:

1. First I assessed injured general condition.
2. I conducted him IV Canala.
3. Passed him analgesic Declofenic injection
4. Passed him Dextrose serum 0.25%.
5. Passed him Glucose serum.
6. Passed him vial. Ceftroroxin
7. Passed him Injection Grievant
8. Completely dressed him and evacuate to ANA hospital in Herat Province

Question-05: Could you please explain the injuries of injured Deminer?

Answer-05: The injured Deminer injuries are as mentioned below:

1. Right hand arm superficial injury.
2. Right hand witness and thumb fingers superficial injury.
3. Front neck crush injury.

Statement and Witness Report 2: Team Leader

Date: 19/04/2007

Question-01: What was your activity while the accident occurred?

Answer-01: I was during visiting of section no-03 Deminer working area the accident occurred.

Question-02: What was the cause of the accident?

Answer-02: The cause of accident mine was found and the Deminer worked with pickaxe.

Question-03: Did you receive complete brief from [3rd national demining agency] team regarding MF-0337?

Answer-03: I have received complete brief about this minefield No-0337.

Question-04: Have you received brief about the last accidents occurred in this minefield No-0337?

Answer-04: Yes we have received brief about two demining accidents occurred in this minefield in the past by [3rd national demining agency] teams.

Question-05: What demining equipments are your Deminer using for excavation in the field please explain it?

Answer-05: We use bayonet and pickaxe for the excavation in this minefield.

Question-06: Do you know about the location of mine belt in this minefield and where it is located?

Answer-06: Yes the mine belt located in the remained unclear area was briefed to me

Question-07: What is your recommendation regarding such accident?

Answer-07: I have recommended that, if the excavation instruments used properly during excavation, so, the occurring of accident will be prevented.

Question-08: Why your Deminer working with pickaxe and you do not have control them?

Answer-08: According the procedure we use pickaxe in the hard surface area, and if the pickaxe used in the area where it is necessary so, it's itself control

Statement and Witness Report 3: Section leader

19/04/2007

Question-1: What time the accident occurred?

Answer-01: The accident was occurred at 08:10 AM.

Question-02: Where was your location when the accident occurred?

Answer-02: I was in work area of another party of my section when the accident occurred.

Question-03: After how much working time the Deminer do break?

Answer-03: The Deminer do 45 minutes work in the field and 15 minutes break after work.

Question-04: When the accident occurred by Deminer did he received break?

Answer- 04: The Deminer was received break from 07:45 Am to 08:00 AM.

Question-05: What was the activity of this injured Deminer when the accident occurred?

Answer-05: 3 minutes before I visited the work site of this Deminer his working area was located about 90 cm to 1 meter from the barbed wire, so I advised him when you reached about 50 cm to the barbed wire, call me we will make decision. In this time he was working by bayonet.

Question-06: What demining equipments were using by injured Deminer for excavation in the field please explains it?

Answer-06: As it has mentioned that in this time I was in another party work site and our work area is consisted tops and his working area was not seeing to me, when the accident occurred it was seemed that he was working by pickaxe.

Question-07: How many mine have been found/destroyed by your section in this minefield?

Answer-07: Totally 7 PMN mines have been found/destroyed by our section No-01 in this minefield.

Question-08: How many mine have been found/destroyed by this party?

Answer-08: Totally 2 PMN mines have been found/destroyed by this party.

Question-09: When the Deminer was working by pickaxe you were in the picture or not?

Answer-09: No I was not informed.

Question-10: What is your responsibility for the Deminer?

Answer-10: I must control their work in the field and don't let them to work negligently, when they faced with some problem in the field I should discussed with team leader and if some technical is out of function I will report to team leader.

Question-11: What was the cause of accident?

Answer-11: I think if the Deminer was not used pickaxe the accident would not been happened.

Question-12: How could we prevent such kind of accident?

Answer-12: In my point of view a section leader can't control five parties in one time, especially in hill site area. If the number of breaching parties reduced in each section so, we will be able to have a good control and prevent such kind of accidents.

Statement /witness report 4: the Victim

Date: 22/04/2007

Question-1: What was your activity while the accident occurred?

Answer-01: I was busy in excavation of mined area suddenly accident occurred.

Question-02: In the area where accident occurred was a high-density fragmentation area?

Answer-02: Of course the area was short and high-density fragmentation in this reason I have to use pickaxe for the clearance of such areas.

Question-03: Did your section leader advised you before the accident occurred?

Answer-03: 5 minutes before the accident the section leader instructed me to clear or excavate 1.5 meter area from the mine belt, in case of any accident dose not put you in the unclear area.

Question-04: When you have started excavation work with pickaxe?

Answer- 04: Thus the land surface was very hard and the area need to be excavated by shovel or pickaxe, so at least without section leader instruction I started with pickaxe and unfortunately in the result accident occurred.

Question-05: Please name the parts of your body got injuries?

Answer-05: During the accident I have got the below mentioned superficial injuries on my arm and neck and so on.

1. Right hand arm superficial injuries.
2. Right hand witness finger superficial injuries.
3. Front nick crush injuries.
4. I have problem with my ears I cannot listen low sound.
5. I am little [statements ends here]

Analysis

The primary cause of this accident is listed as “Inadequate equipment” because the deminer was issued with a bayonet and a pickaxe with which to excavate. The pickaxe is meant to be used to start the excavation in hard ground – and the ground shown in the site photograph included small stones. He made the decision to use the pickaxe, and accidentally struck the mine. The history of accidental strikes on mines with pickaxes in Afghanistan (and with mattocks globally) suggests that the use of a pickaxe is bound to lead to inaccurate excavation. It is probable that the length of the handle kept the Victim far enough away to avoid serious injury. But the handle broke (as usual) and was not thrown away, which means that it was probably the cause of the “crushing” injury the Victim suffered to his neck.

The secondary cause of this accident is listed as “Unavoidable” because accidents with the pickaxe are proven to be so common that they are unavoidable.

The failure of those in management to recognise the danger of the tool and replace it with a blast-resistant alternative is a significant “Management control inadequacy”.

An “Inadequate investigation” is listed under “Notes” because the investigator did not include any details of the CASEVAC.