6-9-2006

DDASaccident453

Humanitarian Demining Accident and Incident Database
AID

DDAS Accident Report

Accident details

Report date:	02/01/2008	**Accident number:**	453
Accident time:	09:30	**Accident Date:**	09/06/2006
Where it occurred:	Task # 1182, Lataband Village, Talugan District, Takhar Province	**Country:**	Afghanistan
Primary cause:	Field control inadequacy (?)	**Secondary cause:**	Management/control inadequacy (?)
Class:	Excavation accident	**Date of main report:**	17/07/2006
ID original source:	01/01/04 out 237-06	**Name of source:**	UNMACA
Organisation:	[Name removed]		
Mine/device:	PMN-2 AP blast	**Ground condition:**	dry/dusty grass/grazing area hard
Date record created:	02/01/2008	**Date last modified:**	02/01/2008
No of victims:	1	**No of documents:**	3

Map details

Longitude:		**Latitude:**	
Alt. coord. system:	WGS 84	**Coordinates fixed by:**	GPS
Map east:	69.74972	**Map north:**	36.75613
Map scale:		**Map series:**	
Map edition:		**Map sheet:**	
Map name:			

Accident Notes

inadequate equipment (?)

handtool may have increased injury (?)

partner's failure to "control" (?)

safety distances ignored (?)

inadequate training (?)

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 BoI report is reproduced below, edited for anonymity. The original PDF file is held on record.

Cover Letter

File: OPS/03/01-08

Date: August 01, 2006

To: Chief of Operations and Deputy Programme Manager UNMACA, Kabul

From: Area Manager AMAC North/Northeast

Cc: Senior National Operations Manager UNMACA Kabul

Sub: [Demining Group] Demining accident report

Attached please find [Demining Group] Survey team no 11 demining accident report, which occurred on 09th June 2006 at Lataband village, Taloqan district of Takhar Province

The following eight documents are attached:

- Initial demining accident report.
- Demining investigation report.
- Free hand Map of the accident point.
- Statements of Team leader, Asst. team leader, injured, section medic and one deminer.
- Minefield No.1182 Map.
- Technical detail of device.
- The casualty ID Card copy.
- Medical report.

Forwarded for your kind consideration and further action.

Initial Demining Accident Report

[Derived from IMSMA forms provided by the Demining group: MF Coordinate Longitude: Not available; Latitude: GPS; 9, June - 2006 09:30am; MF Code: 13/1304/13295/H1182.]

Description of Accident

Based the [Demining Group] OPS Officer verbal report the injured Deminer was during the prodding /excavation at Task No 1182 located in Lataband village of Talucian district to initiating the Anti Personal AP mine when the prodder touched with a sensitive part of this old buried AP mine and blow up, as per the explanations of OPS Officer the deminer was well [protected] with PPE that is cause he has not received a serious injury. [The deminer may lose a hand.]

CASEVAC intentions

According the [Demining Group] report the victim was evacuated by ambulance to Talucian civilian hospital after he received the first treatment aid by team medic in field total transporting time was around 20 minutes from site of Hospital.

Description of Injuries:

He got some injuries not serious without any amputation on his right hand, and lips. The detailed report of this injury will send after investigation. Over all condition of his health is not threatened he is conscious and talking but hospitalized.

Note: the investigation team has tasked just after receiving this report and for today 10 June 2006 team will approach to physical investigate the accident point.

History of the Minefield

The task No 12/1201/12434/H-1182 is located in Lata band village Taluqan district of Takhar province, according to the [Demining group] working procedures, the survey team is busy in clearance of respective task. This task is laid out along the car- track leading to Lata band village, where mines are planted over the sides of this car- track about 700m in length in rain fed crop land.

These mines are planted during the last conflict between Taliban and northern alliance in 1999 up to 2001, when this military post was under attack for accessing control over on , the type of the landed mines in this task are PMN 2, YM 1 and M 4, the type of the land is rain fed crop land, the terrain of the land is uneven and it is hill side, since of the laying of mines in this task one accident was happened on a villager of the Lata band village in March 2005, and 3 accidents are happened on animals of the same village, the last accident was happened on mentioned deminer, task is covered in LIS HQ No 578 SHA No 1, earlier than the contamination of mines within the area it was used as rain fed crop land, the direct beneficiaries of the minefield after clearance are land owners which are two families and indirect beneficiaries of the land are the whole community members that are passing over this land. The requesters for the clearance of this land are the landowner and the inhabitancies of mentioned village. The depth of the mines, which is previously uncovered or revealed by Survey team No 11 during their operations, is 8-15 cm under ground, after the clearance the area is going to be used as rain fed cropland.

Description of the incident/accident

Based on our physical observation from the accident site, the [Demining Group] Survey team No 11 is working in task No 12/1201/12434/H-1182 in Lata band village, Talucian district of Takhar province. The task area status is slope and uneven. The survey team is compo[sed] of 6 deminers one team leader one assistant team leader one medic and one driver. These 6 deminers were divided in three breaching parties working in lanes by 25m safety distance from each other. The deminer who has gotten injured, was excavating in his working lane in sideway of the hill in opposite position when he was prodding from up to down side, whilst the procedure is to work in this kind of area from down to up side in all slop[ing] areas, so when he was excavating the signal point, due to the tightness of the space in the working lane, hardness of the ground, the deminer used the trowel vertically by force to excavate the hard

ground of the task and non proper control on hand during prodding , were cause to trowel touched on the top of PMN 2 mine's pressure plate and was blow up. Base of the technical details of PMN 2 mine it is a little resistant against the pressure than the PMN mine, until the pressure don't come on the top of the pressure plate of the PMN 2 mine it may not explode, that is the reason of the much pressure imposed during prodding drill through deminer. So in the result of the accident the deminer's right hand's paw and palm were seriously injured and his right leg under knee caught a small fragment and was slightly injured, the trowel of the deminer was completely destroyed which remained no any sign of it. The visor of the deminer was deeply scratched and the head band was broken. A bit prior to the accident the team leader of the mentioned team was standing 3-5m away from deminer and was controlling him. Fortunately he didn't sustained any injury. In the same time one another deminer was setting in the working lane of injured deminer at about 10m back side away from injured deminer in cleared area. As per team leader declaration he was tasked to control the injured deminer, fortunately he also remained safe and sound from the [effects] of this mine accident. According to the team medic and witness statement the first aid was conducted to the casualty at the safe medical administrative area after two minutes, and the first aid was lasted about 20 minutes in the site, and than casualty was evacuated by ambulance to the Talugan public hospital in 50 minutes for further treatment.

[The IMSMA sketch records injuries to lips, palm, fingers and lower limbs.]

Time until first facility reached: 2 minutes. Time until first hospital reached: 50 minutes

Description of [equipment] damages: The trowel of the injured deminer was completely destroyed, the visor of the injured deminer was deeply scratched and the head band is completely broken. The ELM (wooden End of Land Mark) is partially broken, The safety jacket of the deminer got some small fragments. The uniform of the deminer became out of use.

Site conditions (at the time of the incident/accident): The terrain was uneven, open hillside. The soil was hard and dry. The weather was clear. The vegetation was grass and bush.

The team has been on the task for: from start of this task 31 working days but from the commence of the current mission 9 days. The team works from 06:00 to 12:30 with a 10 minute break every 30 minutes. The Victim was last on leave from: 22/05/ 006 to 31/05/2006.

The metal-detector used was the “Avenger 420H and 420 SI” [the “Ebinger”.]

The paramedic reached the victim within two minutes of the accident (at 09:32). It took fifty minutes to drive the 21 km to hospital.

Conclusion:

Lack of supervision

1. Non proper periodically conducting of the Internal QA and supervision through OPS section of [Demining group] base of the visitor logbook.
2. The team leader of the relevant team was not so experienced to manage the working lane in a good and safe manner.
3. The team leader of the team managed the working lane sideways of the hill or slope area, but due to the status of the land it would be logical to manage or put in order the working lane from down to up side of the hill.
4. Due to the hardness of the ground the deminer used the trowel by force encounter of related SOP [counter to related SOP] but the deminer or section leader didn't prevent him

from doing such miss excavation. As it said that a little before the explosion, the team leader of the team was standing 3-5 m away from the injured deminer using the trowel vertically earlier than the accident happened, but the team leader didn't hindrance to stop this wrong drill and re-manage his working lane in this slope terrain.

5. The Parties of this team were not significantly managed to meet the working procedure of Organization.

Careless of victims

1. Incipiency of Deminer during inflexible work in the hard terrain of land.
2. The deminer used the trowel by force to excavate this hard surface of the land.
3. Not identifying the main point of signal for carefulness of using prodder /trowel.
4. 4. Not given idea to team leader about vertical (wrong) prodding procedure to team leader).

Improper use of procedures:

1. Survey team is occupied in the clearance of task instead of to conduct the Technical Survey.
2. Conducting the excavation sideways of the hill.
3. Using the trowel vertically in 60 to 70 degrees to excavate the signal.
4. Using the trowel by non normal force on the ground.

Recommendations

1. conducting of Technical survey prior to start the clearance operation of task will much support team command group of team for better management and precaution action for maintaining better safety.
2. If there isn't any proper internal QA capacity the periodical supervisor of team through key OPS staff also will set as sustainable technical support for team and evaluation mechanism within Organisation.
3. Team leader is to manage and mobilise his team's parties according to the [Demining group] field procedure.
4. The team leader is recommended to use some other applicable procedures for prepare smooth terrain for deminers as water.
5. The team leader is recommended to manage the working lane from down to up side of the slope area not from sideways of the hill or slope area up to down position.
6. If team leader is relocated from his control point should appoint the section leader to conduct the proper look on deminers and prevent deminers in any beginning of miss deal during operation because the hazard of mine will not give us the second chance.
7. The section leader and Team leader are to insure themselves about the mood and obvious health condition of deminers if they are ready for commencing of work before start of operation and during operation, as impatience work in demining field is one of the

main factor and cause for missing mine through detecting drill and accident during prodding

8. Changing location for various parties in deferent part of MF will be efficient as change management for team refreshing.
9. Team leader is to stop the vertical prodding and change the direction of breaching parties.
10. The deminers are to use the trowel/prodder maximum in 30 degrees.

As it is explained that the deminer had worked from aside the slope area where the space was very tight and he couldn't use his hand freely the height and the hardness of the ground and the tightness of the space made him to use the trowel vertically

“Cleared Lane from aside of the slope area”

If the team leader of the team arranged the working lane from down to up side of the slope area the mine may disclose easily and cause no casualty. [A poor photograph actually showed the lane working across the slope side-to-side (slightly downward)]. The actual route of the working lane, which was arranged by the team leader for the deminer to work that caused the accident by doing such.

Victim Report

Victim number: 601

Name: [Name removed]

Age: 37

Gender: Male

Status: deminer

Fit for work: not known

Compensation: Not made available

Time to hospital: 50 minutes

Protection issued: Short frontal vest
Long visor

Protection used: Short frontal vest, Long visor (worn

raised)

Summary of injuries:

minor Face

minor Feet

minor Legs

severe Hand

AMPUTATION/LOSS: Fingers

COMMENT: See Medical report

Medical report

Kunduz 14/06/2006

to whom it may concern

Patient: [the victim] 37 years, male

Inpatient since 10.06 06

Medical history: The Patient has a blast-injury of the right hand after mine-explosion. The damaged soft tissue and fractures of the right were particularly necrotic and infected.

Findings:

- Fractures of the distal radius, os pisiforme, MC 1, Base of MC 3, Base of MC 4, MC 5
- damaged soft tissue of the whole right hand.

Treatment: Second Look Surgery with debridement and lavage in 3 steps, osteosynthesis of the right radius with an fixateur externe. arthrodesis of PIP 4, Amputation of Dig 3 and 5 and use this soft-tissue to cover the defected areas (dorsoulnar), temporarily defect-area-covering with artificial skin (Epigard). Antibiotics i.v.

Procedure: We have to make second look surgery every two days.

Medical statements

Accident Report — 09 June 06

[Demining group] Doctor Medical Report

[The photograph shows the right arm bandaged to the elbow and blackened fragmentation injury on the victim’s chin extending to his nose.]

Age: 37

Blood Group: AB Rh+

Position: Deminer

Team: Technical Survey-11

Date of accident: 09 / June 2006

Time of accident: 09:30 AM

Location: Takhar Province Talucian City Lath Banb Village

Task No. 1182

To whom it may concern:

This is certifying that [the Victim] deminer of 11 Technical Survey team was injured whilst he was working in [Demining group] Task No.1182 in Lata Band Area Takhar Province.

The following injuries were sustained on him after explosion:

One deep wide and serious injury on his right hand with tissue defect and multiple fractures

Right Ulna bone distal portion fracture.

Right hand 4th 8,5th Metacarp bone fracture.

Right hand 3rd &Stn

finger first flanxe fractures.

Both side of right hand has wide tissue, muscle and tendon defect.

One wide but superficial erosion on his right leg.

Upper lip erosion and oedema witch is not serious.

And there was some small subcutaneous haematoma and foreign bodies on his both legs and feet.

[The injured legs of the Victim, right leg apparently extensive.]

After first aid and dressing in the field the casualty received the following treatment before reaching to hospital.

Serum Plasma 500 cc

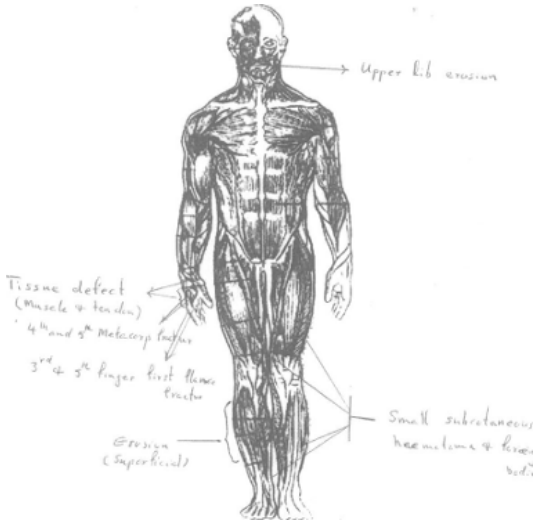
Amp. Pentazocine 30mg

Vial Penicillin Crystal 5 M.

The casualty evacuated to Takhar Public health Hospital. After full examination he was hospitalized in mentioned Hospital. After operation and debridement the surgeon advised that they couldn't help more for casualty due to lack of medical facilities. After 24 hour we transferred the casualty to Kunduz German PRT Hospital. Fortunately there was enough medical facilities, and he is under treatment there.

His general condition is good but according to the German surgeon specialist the prognosis of right hand injury is very bad, because of very bad multiple fractures and tissue defect. If he get a good chance with current treatment, he wouldn't able to use his right hand as a normal hand. The chance of complication like necrosis, gangrene, osteomylitis and amputation is present.

Signed: [Demining Group] North Senior Doctor



Related papers

Follow-up letter

Subject: Follow up action on demining accident happened to the deminer of [Demining group] in task # 1182 in Lataband village, Talugan district of Takhar province.

Reference: Demining investigation report File: 01/01/04 out 237-06 dated: July 17, 2006, of UN-AMAC North.

A demining accident happened on June 09, 2006 in clearance lane of [the Victim] the deminer of Sur-11 of [Demining Group] in task # 1182 of Lataband village, Talucian district of Takhar province, causing multiple injuries to the deminer's right hand, right leg and lips.

The investigation report concluded that, the accident occurred because of poor supervision and control by the command group and carelessness on behalf of the injured deminer, as he was conducting excavation on a signal in a sideway of a hill in his clearance lane from up to downward direction. The investigation report further indicates that, the deminer was using his trowel vertically/by force to excavate the signal in a hard ground of the minefield, and the second deminer was about 10 meters away from him, not considering the safety distance during operation.

Recommendations:

11. The command group of team should supervise/control the deminers during operation.
12. A proper and periodical internal QA of the teams need to be conducted by OPS staff of [Demining Group].
13. The deminers should not be allowed to operate on a signal, from up to downward directions.
14. The team leader is recommended to manage the working lanes from down to upward directions, based on standard.
15. Refresher training should be held for the team members.

Regards,

Distribution List

With attachment:

AMACs (5), Sub AMAC Gardez and Director [Demining Group]

Less attachment:

[All other demining groups working in Afghanistan.]

STATEMENTS

Statement and Witness Report 1

1. Respectful Please introduce yourself.

My name is [Name removed] my insurance No is 500, blood group ORH + I am the team leader of the team No 11 technical Survey.

2. Identify the task No and the type of mines

The task No is H- 1182 and the type of the mine used in the task is PMN2, M4 and YM1

3. At the time of accident where was your location

At the time of accident I was in front of the deminer about 5m away from the accident point.

4. Based to observation from the task, the land has slope, you instructed the deminer to work aside the slope instead of you are to manage the working lane from down to up side what is the reason for working aside the hillside?

Where the deminer was working it was flat area not as slope as to create trouble to the deminer.

5. How often internal QA or visits have been done by your supervisors from beginning of the work in this task up to now?

From the beginning up to now the internal QA or the visit have been done only once.

6. Narrate the actual cause of the accident.

The excavation drill was conducted as per SOP but I think the deminer didn't use the trowel properly, in my opinion he used it vertically. It wasn't exist a proper procedure to avoid such accident. The procedures were applied as per SOP but the accident was happened.

7. Please pin point the mistakes which lead to accidents.

Only the deminer misused the trowel the trowel touched to the mines vertically.

8. Whilst the deminer misused the trowel why you as a controller didn't prevent him?

Prior the accident he used the trowel as per SOP but I think he used the last trowel vertically on mines which caused the accidents.

9. Have you aware from the psychologically, physically and mentally status of the deminer prior to the accident.

Yes he was sound and healthy.

10. Didn't the casualty have the family and economically problems prior to the accident?

No he never had any worries regarding the family.

Signed and dated: 10/06/006, Time: 2:00 pm

Statement and Witness Report 2

Place: Talucian 10/06/006 Date: Time: 2:20 pm

1. Please introduce your self.

My name is [Name removed] Assistant Team leader of team No 11 Technical Survey, insurance No 1958 Blood group A+.

2. Please depict the start date of the task, working days in the task and the progress in percentage of the task.

The task start is 1,05, 006, working days of the task is 31 days and the progress is 43%.

3. During the accident where were you situated?

I was quality checking of the cleared working lane about 60 m away from the accident point.

4. Please depict the procedure of the putting marker to signal and using of the trowel.

The marker is to be put at beginning of the signal, and trowel is to be used parallel to the ground.

6. As you said that the working from down to up side had efficiency what was the cause that the injured deminer worked form aside?

As I was situated away from the injured deminer working lane and I was controlling the other deminers so I don't know the why the deminer worked from aside of the hill.

7. After how long you got to the casualty and when the first aid was initiated to the casualty?

I reached to the accident site in two minutes and the first aid was initiated to casualty in 9:32 for about 20 minutes.

8. What suggestions do you have for prevention of such accident in the future?

My suggestion is to measure any signal as a mine correctly confirmed and to correctly put the marker to the mine and also the deminer must be under control of command group continually.

9. Whereas it was done as mentioned above why the accident is happened?

The deminer didn't use the trowel properly as per SOP.

Statement and Witness Report 3

Place: Taludan Date: 14/06/006 Time: 3: 00 pm

[The Victim] injured deminer/ team No 11 Survey/ [Demining Group]

1. Please introduce yourself.

My name is [Name removed] deminer of team No 11 Survey my insurance No is 3053 my blood group is AB +.

2. In which task were you working and when the accident was happened on you?

I was working in task No H- 1182 and the accident was happened in 9:30 am.

3. What was the cause that you used the trowel vertically on mine?

The cause was the hardness of the land that I used the trowel vertically.

4. Once you were working encounter of SOP and you used the trowel vertically why the team leader didn't prevent you from doing such mistake?

Due to the non- flatness of the ground the controlling was impossible on time.

Statement and Witness Report 4

Place: Talucian Date: 10/ 05/006 Time: 3: 20 pm

1. Please introduce yourself.

My name is [Name removed] the section medic of the team No 11 Survey/ [Demining Group].

2. During the accident where you were situated and in what activity you were busy?

I was situated 120m away from the accident point and I was watching the deminers working in their working lane.

3. After the accident in how much time did you reach to the accident point and what did you do?

After the accident based to the recommendation of team leader I got to the casualty in two minutes, with help of second medic I controlled the breathing of the casualty, which the breathing was normal we laid down the casualty and searched for the injuries points than we controlled the bleeding of the casualty by loading pressure on the injuries points and took the injuries up from the level of heart than we searched all of the injured bodies for another injuries than we implement the Plasma serum and injected the Pentazosin and veial benzayel Penicillin Ampoule by canola.

4. Please express how long did you conduct the first aid, in how much time did you evacuate the casualty to the hospital, and by what did you evacuate him?

The first aid was conducted in 20 minutes, the casualty was evacuated to hospital by ambulance in 50 minutes and the distance from task to hospital was 21 km.

5. Did you carry out the CASEVAC drill prior the accident?

Yes we conducted the CASEVAC drill in the site on 3/06/006.

6. Please describe the injuries points of the casualty.

The deep injuries were in the right hand and a slight injuries in the right leg under knee.

Statement and Witness Report 5

Place: Talucian Date: 10/06/006 Time: 2: 40 pm

1. Please introduce yourself.

My name is [Name removed] insurance No 3153 the blood group is B + deminer of team No 11 Survey.

2. You were working with the injured deminer in same working lane by round, what did you assess the psychologically and physically position of injured deminer prior to accident?

His psychologically and physically position was normal and he was excavating normally.

3. Based to the observation from the accident site it seems that the deminer used the trowel vertically on mines if so why didn't you and team leader prevent him from committing such mistakes?

As I was sitting back about 10 m away from him he was normally working I didn't see any mistake made by him.

4. During the accident in what distance were you sitting?

I was sitting 10 m away back to him.

5. What suggestion do you have to prevent such accident in the future?

1: the signal is to be correctly confirmed, 2: the marker is to be positioned correctly, 3: the excavation is to initiate 15cm back form the signal, 4: the trowel is to be used parallel to the ground not vertically.

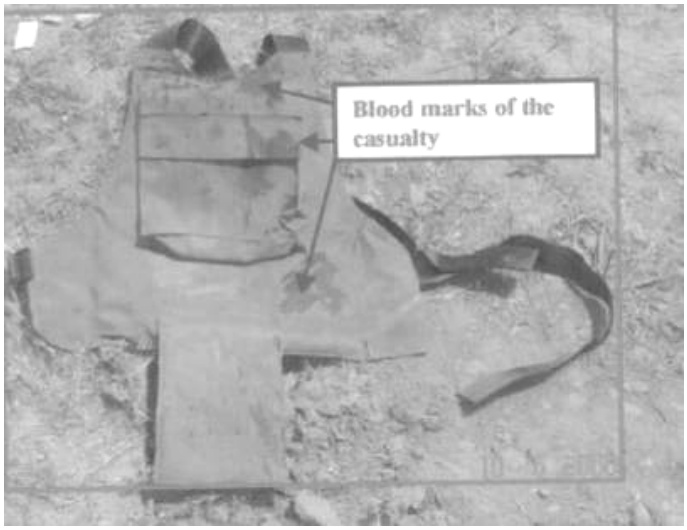
6. The procedure that you described above wasn't maintain[ed] by the deminer.

It is seemed that the deminer used the trowel vertically in 50 degrees.

Analysis

The primary cause of this accident is listed as a “Field Control Inadequacy” because the investigation report concluded that the accident occurred because of poor supervision and control, and there was inadequate internal QA. The injuries show that the deminer was working with his visor (at least partly) raised. The Trowel that “disappeared” may be identified by the fragments of wood that were shown in a photograph as the “Mattock” favoured by this demining group and that has featured in many accidents (and is often called a “trowel”. The mattock and the short frontal body armour (that does not meet the IMAS) are the “Inadequate equipment listed under “Notes”. The wooden handled mattock frequently breaks in a blast and the fragments have caused severe hand and arm injury in other accidents.

The demining group’s continued use of inadequate protection and tools that do not meet the IMAS are the “Management Control Inadequacy” listed as the secondary cause of the accident.



[The photograph shows the minimal frontal protection with no collar to interface with the lower part of the visor, so leaving the throat exposed even when the visor is worn correctly.]