11-12-2006

DDASaccident502

HD-AID
Humanitarian DeminingAccident and Incident Database

DDAS Accident Report

Accident details

Report date:	23/01/2008	**Accident number:**	502
Accident time:	11:00	**Accident Date:**	12/11/2006
Where it occurred:	Task # 0007, Chaegari Village, Khulm District, Balkh Province	**Country:**	Afghanistan
Primary cause:	Field control inadequacy (?)	**Secondary cause:**	Management/control inadequacy (?)
Class:	Excavation accident	**Date of main report:**	26/11/2006
ID original source:	OPS/01/01/04-out/437	**Name of source:**	UNMACA
Organisation:	[Name removed]		
Mine/device:	PMN AP blast	**Ground condition:**	grass/grazing area hard rocks/stones
Date record created:		**Date last modified:**	23/01/2008
No of victims:	2	**No of documents:**	2

Map details

Longitude:		**Latitude:**	
Alt. coord. system:		**Coordinates fixed by:**	GPS
Map east:	E0674155.1	**Map north:**	N 363808.1
Map scale:		**Map series:**	
Map edition:		**Map sheet:**	
Map name:			

Accident Notes

inadequate survey (?)

inconsistent statements (?)

visor not worn or worn raised (?)

protective equipment not worn (?)

partner's failure to "control" (?)

long handtool may have reduced injury (?)

use of shovel (?)

inadequate training (?)

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. Text in [ ] is editorial.

Cover letter

File: OPS 01/01/04/out/437/06

To: Chief of Operations, UNMACA Kabul

From: Area Manager UNA North and North East

Date: Nov/26/ 2006

Sub: Demining Accident Investigation Report of [National demining agency], Sur-No.10

Attached please find the demining accident report of [National demining agency] Survey Team No.10, which was happened on 12/Nov/ 2006 at Cheitgari village Kholm District of Balkh province.

Forwarded for your information and kind consideration.

IMSMA Demining Investigation Report

Date of incident/accident: 12/11/2006, 11:00 Hrs am.

Location: E 067 42 02 N 36 37 58.6, GPS. Coordinates of Accident point E0674155.1 N 363808.1. Mine Field Code #: AF/1614/32219/0007. GPS Accuracy: GARMIN, 14 Feet at the time of fixing the coordinates of the accident point.

History of the Minefield: MF.007 is located at Chetgari village, Khulam district of Balkh province where currently the technical survey by [National demining agency] Survey team no.10 is on going.

Task no.007 started by [National demining agency] Sur.T-10 on 24-Sep-06 and it is ongoing (92%) but unfortunately on 12-11-2006 at 11:00am demining accident happened on [Victim No.1] Surveyor of [National demining agency] Sur. Team no. 10, while he was busy on excavation in the boundary lane. Generally Land type of the contaminated area is Grazing in accordance with the LIS information the mentioned community is accounted as high impact, including three suspected hazard areas (SHAs). This is a self Propelled (weedy) land for a kind of Vegetable using for medicine that is exported from Afghanistan to India ... which is accounted as a main income beneficiary for the inhabitants housed around. The MF location is 40-50 Minutes foot distance far from the community top of the hills. Based on the LISA information, the land has contaminated by AP, PMN and POMZ type mines during 1983-1986 by Russian and their Mercenary government, using [mines] as defence tools for protection of their Posts that are placed for the Security of Kabul —Mazar highway. This contamination has caused for 40 mine victims, resulted 17 killed and 23 injured, in addition of one Demining accident that occurred on [Another national demining group] deminer in the boundary lane of

task no.001 on Tuesday 10th May 2005 in SHA 01. Initially the task no.007 is a portion area of SHA-01 which has share boundary lane with Cleared task no.001.

Device was detonated by Surveyor. Apparently, the accident has occurred in the boundary lane during excavation. Device that caused the incident/accident AP PMN.

According to the information of team leader and contaminated area back round detonated mine was PMN but we couldn't see any part of the PMN mine.

Device was detonated while the surveyor of team no.10 was busy on excavation in the boundary lane, which had 25-30 degrees slope and he excavated from top to bottom contour direction.

Description of the incident/accident: According to the statements of respective Team leader, which was confirmed by all members of the team, at 11:00 hrs, [Victim No.1] blasted by anti personnel PMN mine during excavation on signal detected through him along the boundary lane between TP- 13 to T P- 12 of task no.007 located Chetgari village, Khulam district of Balkh province, while he was protected fully by PPE but his visor was not maintained to cover his face during his operation on point when the prodder struck with mine and accident happened.

[Victim No.1's visor: fragment strikes are visible on the forehead rim of the plastic helmet.]

When the accident occurred on [Victim No.1], the second Surveyor [Name removed] controlled his operation 25m away from TP-13, third Surveyor [Name removed] and team leader [Name removed] were 48m away close to TP-14. The team leader was busy to task [Name removed] third surveyor to carry out stones for boundary lane [when] suddenly [the] accident occurred.

Also [Victim N.2] surveyor of the mentioned survey team slipped down due nervous and as the resulted stepped out his ankle of right leg [dislocated his ankle].

After five minutes the Paramedic reached himself and after determining of first aid the victims are evacuated to the hospital.

Casualties

[Victim No.1] Surveyor: Activity: Prodding.

[Victim No.2] Surveyor: Activity: Collection of stone [for area marking].

[Victim No.1] Injury

1- Serious injuries in both eyes

2- Both hands slightly injured.

3- One or two fragments in abdomen.

4- Face was slightly injured.

5- Both legs were slightly injured.

[Victim No.2] Injury: Relocated his right foot ankle

Description of equipment damage: Inside of the visor got fragments. PPE got fragments. Peak of the prodder damaged.

Site conditions: The terrain was described as “top of hill”. The soil was described as “medium”. The weather was clear and 17C. There was no vegetation.

[The picture below shows the accident site. The indentations in the foreground are excavations made using a “shovel”.]

Team and task details: Last QA inspections: External: 08-11-2006; Internal: 06/11/2006 Field Supervisor [National demining agency]. The Team had been at the site for 22 days. Working hours were 07:00 – 13:00. The detector in use was the Ciea Mil-D1. [The Victims had returned] from mission leave on 29-10-06. The [PPE] vest was used properly as there wasn't any sign of injuries on the chest of victim. But the Helmet was not used properly and the visor was up as the fragments stuck from inside of the visor and his eyes and face got injuries. [There were abdomen injuries.] First CASEVAC drill on [site was conducted] 11--10-06 second CASEVAC drill on 01/11/06

Medical reaction time: The paramedic was at the accident site within five minutes. He treated the casualty for five minutes. The Victims were then driven 64 km to hospital in 45 minutes. Total CASEVAC time: 55 minutes.

For the first time the victim has evacuated to Jordan Hospital in Mazar Airport and the spent a good deal of attention to the issue as the Jordan hospital was not complied with the eyes ward so the victim was advised to visit the eyes doctor or hospital for further treatment; when the necessary aid was administrated to him. After discussion with eyes doctor he advised to hospitalize him either in Mazar or Kabul. As the facility in Kabul hospital is more [better equipped] than Mazar so the victim was evacuated Kabul.

Conclusions

As the accident investigation [was] conducted on the second day of this accident when the point was on his nature sight also the accomplished interview with the witness and team member assist to reach the following conclusion.

The main factor of the accident was clearance of boundary lane from up to down position because the boundary lane had 25-30 degree slope and the surveyor continued clearance operation from top to bottom direction when the deminer can not control himself during prodding and pressure come on mine through prodder, also this system is not acceptable in manual clearance procedure.

It is concluded that the victim was using the [folding] shovel instead of bayonet, based on the following factors:

1. The signs of using the [folding] shovel clearly seen over the portion of lane checked along the day.
2. As the [past] experience shows, when the accident happened on deminer during the prodding with bayonet, he almost [always] receiving amputation on his one hand's one or two fingers, but case is opposite in this accident as both hands of the victim received slight and round about same injuries without breaking of his finger bones or amputation because the shovel is used by both hands. Moreover, according to medical report, both hands of the victim Surveyor had hurts laceration in backsides of the hands,
3. From the general view stricken fragments [of fragment strikes from] due to this explosion show that the victim was in bowing position and operating on signal by shovel as the fragments almost covered all his front side of body but not seriously injured him due the distance more than normal between him and the main point of accident.
4. When it was asked from team to show the shovel they made excuse for presence of that tool.

The task management of team leader to select the correct direction for team do make boundary lane in accordance to the standard of operation was poor and was not match considered to that issue.

The victim's Visor was up during the excavation which is caused to receive some injuries in his face and specially eyes.

About the damaging of bayonet, it cannot be proved if it is affected in direct stricken [was caused by a direct strike] with mine.

Recommendations

The operation with current direction (up to down) is to stop immediately and change the direction as per the requirement of SOP, that was physically advised to the team leader.

Internal QA monitoring for [National demining agency] team No.10 is done very few in the mentioned task; as internal QA is very useful for operations of the teams, so it is recommended to the [National demining agency] site office to increase the internal QA as much as possible to proper monitor about implementation of procedure through team.

As this accident has also happen due to neglect of victim by using the shovel up hold visor during excavation and operating on mine so, the team's command group is strongly

recommended to be aware of their staff and keep eye-contact and control each single activity performed through deminers /surveyors.

Refresher course [was] conducted on 30-Oct-2006 in [National demining agency] site office Mazar-e-Sharif but unfortunately the victim surveyor was on leave and missed the refreshing course. So it is recommended that team leader or site supervisor is to pass the massage of the refresher course materials. In the case of any practical training, it should take place at the site of operation.

Team leader is to split out the daily action plan and discuss with the team members to find the solution if there is any constraint against SOP implementation so refer it to consultation and advice of site supervisor.

Attachments: [Held on file.]

Follow-up letter

File: OPS/03/01-26

Date: December 19, 2006

To: See distribution list

From: Acting Chief of Operations UNMACA, Kabul

Subject: Follow up action on demining accident happened to the surveyor of [National demining agency] Sur-10 in task # 0007 of Chaegari village, Khulm district of Balkh province

Reference: Demining investigation report File: OPS/01/01/04-out/437-06 dated: November 26, 2006, of UN-AMAC Mazar.

A demining accident happened on November 12, 2006, at 11:00 in task # 0007 of Chetgari village, Khulm district of Balkh province, a PMN mine exploded on [Victim No.1] the surveyor of Sur-10 of [National demining agency], causing serious injuries to his both eyes and slight injuries to his hands, abdomen, face and legs. And a second surveyor [Victim No.2] was also involved and his right ankle joint was dislocated.

Contributor factors to the accident:

1. Poor management of the task/poor supervision: as the survey team was conducting the clearance of boundary lane around a minefield located on a hillside and the clearance lane (boundary lane) was selected from up to down direction (poor management of the task), and also the visor was kept up by victim surveyor (his eyes were seriously injured) and as seems from the cleared/excavated ground behind the accident point, it is assumed that the folding shovel had been used for excavation of signals, but in both cases he was not controlled and corrected by his team leader (poor supervision).
2. Lack of training: excavating signals from up to down direction and use of not approved tool for the excavation and keeping up the visor show that the team needs re-training. Although the team was trained on 30th of October 2006 (one day refresher training) but the victim surveyor was on leave in mentioned date, and as per the investigation report, the fault was not made only by victim, but the second surveyor for his control and the team leader were also included.

3. Carelessness/not using proper tools: the surveyor was not using approved prodding/excavating tool and kept his visor up indicating his carelessness in dealing with mine clearance activities.

Recommendations:

The operation/supervisors of [National demining agency] should ensure that a proper management of the task and approved tools have been using for the clearance of boundary lanes around and cross lanes in the minefields.

The command group of the team should pay full attention to the activities carried out by each individual surveyor/deminer during the clearance operations and ensure the a) proper practicing of safety measures, b) proper demining tools are being used and c) practicing standard and safe procedures according to SOPs.

Team leader should brief the daily action/operation plan to the team members and seek their opinion to find solution if faced any constraint against SOP implementation and refer to advice of supervisor if needed.

A refresher training to be held for the team members with focus on task management, operation in areas with slope and excavation/prodding drills.

Disciplinary action to be taken against command group of the team.

The feedback of [National demining agency] is needed as NL than the end of December 2006.

Distribution List

With attachment: AMACs (5), Sub AMAC Gardez, Director [National demining agency]

Less attachment: [All demining groups working in country.]

Victim Report

Victim number: 662

Name: [Name removed]

Age: 30

Gender: Male

Status: surveyor

Fit for work: no

Compensation: Not made available

Time to hospital: Three hours, thirty minutes

Protection issued: Frontal apron
Long visor

Protection used: Frontal apron, Visor worn raised

Summary of injuries:

minor Abdomen

minor Hands

minor Legs

severe Face

AMPUTATION/LOSS: Eyes

COMMENT: See Medical report.

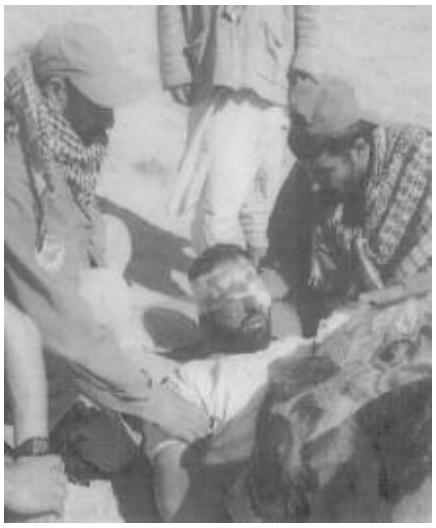
Medical report

IMSMA record gives DoB: 1976

First hospital reached: 2:30 (14:30)

“Serious injury both eyes (loss) and a surface injury can be seen on his face, legs and stomach by fragments.”

[The picture below, showing field treatment, was included with the report.]



Victim Report

Victim number:	663	**Name:**	[Name removed]
Age:		**Gender:**	Male
Status:	surveyor	**Fit for work:**	presumed
Compensation:	Not made available	**Time to hospital:**	Three hours, thirty minutes
Protection issued:	Frontal apron Long visor	**Protection used:**	Not recorded

Summary of injuries:

severe Foot

COMMENT:"The explosion of mine affected to [Victim no.2]. He afraid and fell down and relocate the bone of his right foot." No Medical report was made available.

STATEMENTS

Statement and Witness Report 1: Team leader

Date: 13/11/2006

Q1: When the casualty occurred, where was your location?

A1: When the casualty occurred, I was 48m away from victim surveyor. I tasked Surveyor number three to collect stone for boundary lane at this moment accident occurred.

Q2: What was the reason of Accident on [Victim No.1] surveyor of team 10?

I don't know the reason of accident, but the area was suitable for prodding. You closely visited the area. It was the mistake of victim surveyor by himself.

Q3: Dear team leader of team 10, who was blaming in that accident?

A3: As I described above that wasn't any problem in the field for clearance therefore the victim surveyor was blamed because he know all regulation of the demining. In the time of accident he used PPE and Helmet.

Q4: Dear Team leader of team 10, please write detail of the Accident?

A4: On 11:00AM occurred on [Victim No.1] surveyor of team no.10 when he was searching to find a target by prodder. All members of the team were in their location. After accident stopped operation and area cleared for relocation of the victim then relocated victim to cleared area and first aid done by paramedic. After first aid relocated to Admin area then relocated to Jurdun Hospital Mazar-e-Sharif Airport.

Q5: For the prevent of this kind of mine accident, what should be done?

A5: If all tools, which are we have and we must careful use accordingly possible to stop that kind of accident.

Q6: As you mentioned that the victim surveyor used PPE and helmet that why his eyes injured please explain it?

A6: If he didn't use PPE why his more part of the body didn't injured. All parts of his body didn't get injury with out his face, possible at this moment his visor be not down.

Q7: At the time of accident [Victim No.1] was in which style please explain it? Or at the time of accident what did [Victim No.1] do?

A7: When I asked from controller of the victim he told me the mentioned victim was sitting in kneeling style, when he tried to relocate soil he was in semi kneeling mode and accident happened.

Statement and Witness Report 2: Field supervisor

Date:13/11/2006

Q1: Please explain that who is blamed in this mine accident?

A1: As we visited place of accident and heard statements of team leader [Name removed] surveyor of team 10, due to his personal careless during prodding accident happened on him. His face and eyes had hurts these hurts shown that his visor wasn't down. Command and control of the team leader is so good he is very active person. Demining operation is very dangerous therefore it is required to do demining operation with completely Patience and according to SOP of the agency to stop that kind of Casualty.

Statement and Witness Report 3: Assistant team leader

Date: 13/11/2006

Q1: Please write Detail of the accident?

A1: I was 25m away from [Victim No.1] victim surveyor. Before him, I was busy on boundary clearance operation. When my time finished, I given him all information regarding my work then he start activity. So I was 25m away and busy to control his operation and the accident happened.

Q2: Where was your location while accident occurred on [Victim No.1] ?

A2: I was 25m away from him and busy to control his operation.

Q3: You were 25m away from [Victim No.1] and controlled his operation. What was his negative act that the accident happened?

A3: [Victim No.1] was busy on prodding that the accident happened. I couldn't see his negative act during prodding just his visor was not down. I told him your visor is not correct. In this time he stand and accident occurred.

Q4: It is clearly looking form the accident point the demining operation done from up to down. Did you inform your Team leader or Supervisor that work from up to down is not according demining SOP?

A4: We watched that the field didn't have a lot of slope so we done operation from here from up to down. And the supervisor visited us few days a go, he told us you should follow the new procedure of [National demining agency] but unfortunately to implement this procedure and at the result accident occurred.

Q5: What should do be done to stop this kind of accident?

A5: The area, which is very high like that, first should take advantage from Helicopter. If no chance of Helicopter, needs to provide Horse or donkey to reach the field easily and work on cool and normal mind. It very difficult that surveyors relocate all survey equipments to the top of hill and work as well.

Analysis

Victim No.1 suffered injuries to the abdomen, which may imply that his body armour was not worn, or not worn correctly.

The primary cause of this accident is listed as a “Field control inadequacy” because the investigators found that the clearance plan for the task was in breach of SOPs, the Victim was working downhill and using the wrong tools, and was not wearing his PPE correctly. Not only were these errors not corrected, the field supervisors attempted to mislead the investigators about the tool in use at the time. 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”.