DDAS Accident Report

Accident details

Report date:	29/12/2007	**Accident number:**	451
Accident time:	10:55	**Accident Date:**	04/09/2006
Where it occurred:	ME No-070719-013-021, All Khil village Jaji District, Paktya Province	**Country:**	Afghanistan
Primary cause:	Management/control inadequacy (?)	**Secondary cause:**	Unavoidable (?)
Class:	Excavation accident	**Date of main report:**	20/09/2006
ID original source:	SE-05	**Name of source:**	UNMACA
Organisation:	[Name removed]		
Mine/device:	PMN AP blast	**Ground condition:**	dry/dusty hard rocks/stones
Date record created:	28/12/2007	**Date last modified:**	29/12/2007
No of victims:	1	**No of documents:**	2

Map details

Longitude:		**Latitude:**	
Alt. coord. system:	WGS 84	**Coordinates fixed by:**	GPS
Map east:	069 42 40 0	**Map north:**	33 56,08 0
Map scale:		**Map series:**	
Map edition:		**Map sheet:**	
Map name:			

Accident Notes

inadequate equipment (?)

pressure to work quickly (?)

mechanical follow-up (?)

squatting/kneeling to excavate (?)

inadequate medical provision (?)

inadequate area marking (?)

inadequate investigation (?)

Accident report

UN MACA investigation report was made available in September 2006 as a PDF file. The following reproduces that report, without names and with repetition removed. The statements (see Other documents") provide additional information.

Investigation report

Team and task details

[Derived from IMSMA report forms: The team has been working since 08-08-06. a total of 26 minefield days. They work from 06:00 to 12:00 with a break every 30 minutes. The general mood of the team was recorded as "unhappy". They use the CEIA Mil D-1 metal detector and a "prodder/bayonet". The victim wore his PPE correctly and was last on leave from 29/07 to 07/08/2006. "The Physical location of the area and bushes are usually causes for the accident".]

The area has been observed by investigation team on the day when accident occurred: This area is more contaminated by mines and is wooden land including visitation in comparison to other part of Southeast.

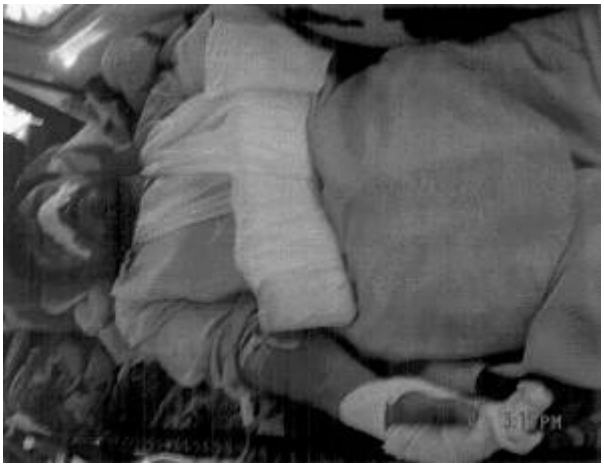
[The accident site – showing rocky ground with sparse vegetation and sparse area-marking.]

[Derived from IMSMA report forms: Ground was uneven, open hillside. Soil was hard and dry. Weather was clear, calm and mild. Vegetation was grass and bush and rocky [sic].]

Since the area is uneven and hillside with bushes and density of mines, therefore, the position of mine was changed by backhoe during the area preparation. As the area is prepared by MDU and was soft, there was no need for Bayonet excavation. In fact deminer[s] made faults including section leader even team leader.

The accident occurred during the prodding in the field while the deminer was equipped by all means of protective tools and type of mine was anti-personnel PMN.

While Deminer was using mine detector, he found a signal, so he excavated the ground till he found a can and took it out. He checked again, still there was signal. He had started for more prodding. Suddenly the mine detonated. In result, he got injured on his right hands. Nose, lover lip, left Hand ,right Hand



[A photograph shows the victim's left arm bandaged to above the elbow, right hand bandaged and nose and lips cut. The Victim is looking at the camera in another picture and appears to have suffered by eye injury.]

As a result of the explosion, a Bayonet, Helmet Visor and PPE (Personnel Protective Equipment) have got damaged.

[The Victim's visor (helmet mounted) had broken again – and this may have added to his facial injury. The design of these visors includes weaknesses that make breakage common.]

Medical reaction time:

[Derived from IMSMA report forms: the medic reached the Victim at 10:56, one minute after the accident. The Victim left for hospital at 11:10 am and arrived at hospital at "6 pm", a total of six hours and fifty minutes in transit, seven hours and five minutes from accident to hospital. The victim was taken 180 km to Kabul emergency hospital.]

Conclusion

The fault was from deminer, since the area was prepared by MDU, then he was not has to use bayonet in pressure. The easy way was that he could use [Demining group] made small Rampa (all Afghans are using it for to cut Gandana) is an easy tool which is using by [other demining group] and [this Demining group] has the same, but they have not used them yet.

Recommendations

Recommendation of the team is that team leader should brief his deminer for proper using of demining tools in proper location. According to standard operating procedure SOP. Since bayonet was used on pressure, so the accident happened.

Victim Report

Victim number:	599	**Name:**	[Name removed]
Age:		**Gender:**	Male
Status:	deminer	**Fit for work:**	not known
Compensation:	Not made available	**Time to hospital:**	Seven hours five minutes
Protection issued:	Frontal apron Long visor	**Protection used:**	Frontal apron, Long visor

Summary of injuries:

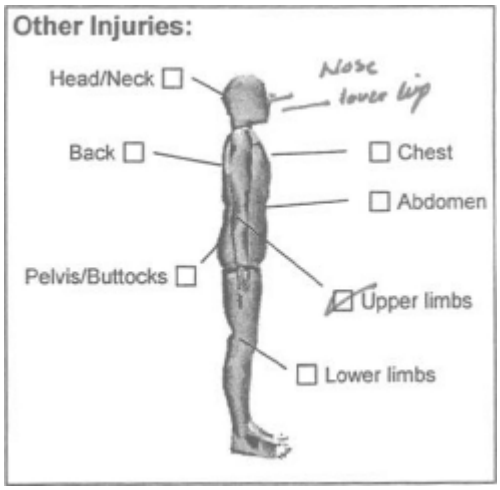
severe Arms

severe Face

severe Hands

COMMENT: See Medical report.

Medical report



The IMSMA report shows injuries to both hands and forearms, and to the nose and lower lip. It records:

1. pass IV cannula
2. susigay
3. Start IV Hesid Ringer
4. Wash of wounds
5. Cleaning of wounds with antiseptic.
6. Dressing

In FMU check of vital signs.

7. Declofinac 75mg
8. dressing with burns after op. Cleaning of wounds with [illegible] hydrogen peroxide.
9. Use of splint close of ulna fracture.
10. Refer to Gardiz [hospital].

No formal medical report was made available. The medic recorded: “irrigation of cold boiled water bath eye lavag with normal saline; iv ampiclox 1 gr…; left hand brachiaum anti brachsion…; right hand brachiaum…; Nose injuries.

Photographs showed extensive bandaging on hands and arms.

STATEMENTS

Statement and Witness Report 1

[Deminer (15 years experience) who was in the rest area when the accident happened.]

Questions:

1. Please give information about your daily tasks and your de mining experience?
2. Please explain how and where were you when the accident happened?
3. Give information about the accident?
4. In your opinion what was the main cause of the accident?
5. In your opinion were there any ways to prevent such accidents if yes? What are they?
6. In your opinion was the area prepared properly by Backhoe machine?
7. Was the work of Backhoe satisfactory or not?
8. Give me information about the victim' experience and personal life?

Answers:

1. I am working as a deminer in [Demining group], MCT 20; I have 15 years demining experience with the mentioned organisation.
2. During the accident I was 70m far from the accident point in the area.
3. During this day first I started work after one hour [the Victim] start the work and also backhoe work in this area till 10:00 and [the Victim] again start the work in this point from 10:30 and the accident happened at 10:55.
4. In my opinion if the backhoe was taking the soil to a clear area and then check by detector so it could prevent the accident.
5. The preventive way of accident is to a way the target as we were trying to achieve the target that also can be a cause of accident.
6. This area completely prepared by backhoe machine and backhoe machine work was satisfactory.
7. My friend [the Victim] had good experience about demining and his personal life is normal.

Statement and Witness Report 2

[Section Leader with 16 years demining experience.]

Questions:

1. Please give information about your daily responsibility in the demining team?
2. Please give information about the occurred of the accident?
3. Give information that how many mine found by the victim deminer in this task?
4. In your opinion what is the main cause of this accident?
5. Were there any ways to prevent such accidents, if yes? What are they?
6. When the accident occurred what did you do and where was your location?
7. The point where accident happened, was it prepared by backhoe machine properly?
8. From how long the victim deminer worked on the detected point?
9. Give information about the demining experience and personal life of the victim?
10. Give information about the injuries of the victim?
11. Please give information that the use of backhoe is useful in such area and does it reduce the risk?
12. Where was the team leader location when the accident happened?
13. If the area is soften by backhoe machine, is the prodding needed to be conducted with stress?
14. As per observation of the victim body, his left side had more injuries. So please give me information that why?

Answers:

1. My name is [name excised], I am a section leader in MCT No 20 [Demining group], My main responsibility during the work on the site is controlling my parties, control of their equipment, and close control of deminers and also control of parties from the control point if de-miner make some mistake, I inform them on the spot.
2. May be the position of mine changed.
3. In the mentioned task [the Victim] found two mines.
4. During the work [the Victim] wore full PPE and work according to the SOP, just the changed position of mine caused the accident.
5. These way could prevent the accident:
    a. Work as normal
    b. Do not conduct stress on bayonet
6. My location was in CP 30 meter away from accident point. This point was already prepared by backhoe machine.
7. [The Victim] deminer was prodding on this point and area was short by fragment, deminer didn't work for long time on this point how the position of mine was changed so the accident happened.
8. The [Victim]’s demining experience is good always he worked according to the SOP, the personally life is normal.
9. The victim nose is injured by stress of visor during the accident and right hand, left hand's injured too.
10. The use of backhoe machine is better for us, it reduces the risk of mine for deminer.

11. The location of the team leader was on the section No land away from me.
12. The backhoe machine prepared the mentioned area, and stress on bayonet is not necessary on such area.
13. During the prodding the position of de-miner was as per procedure, in this time may be this deminer kept the left hand out of PPE. Therefore he has gotten injuries on his left hand.

Statement and Witness Report 3

[Team Leader, (18 years experience)]

Questions:

1. Please give information about your daily tasks and responsibility in the team?
2. Please give information about the happening of accident and where was your location?
3. Please give information about the personal life and demining experience of victim?
4. Please give information about the percentage of cleared area and how many mines were found by the victim deminer in this task?
5. In your opinion what was the main cause of the accident?
6. In your opinion were there any ways to prevent such accidents if yes? What are they?
7. The salary of personal give for them on the time?
8. While the deminer perform prodding with right hand, and used the PPE also, why the left hand of this deminer injured?
9. In your opinion did the relevant section leader conduct their responsibility against his section correctly?

Answers:

1. My name is [name removed] I am as a team leader of MCT No 20 [Demining group], my main responsibility is that to control and managed the team works on the site and out of the site. And during the happening accident I was controlling the section No 1 and 2.
2. I was in section No 1 in this time I wanted to go toward the section No 2 suddenly the
   accident happened on [the Victim] deminer.
3. The victim de-miner had good de-mining experience.
4. The percentage clearance of task No 021 was 75%, the mentioned deminer during the last days found a PMN mine, in the area was prepared by backhoe, it was the second mine that he found which was explode on the mentioned deminer.
5. The main cause of the accident is change position of the mine.
6. If the big backhoes (HITACHI) work on such tasks the accident can be prevented.
7. The salary of the personal are submitted on the time.
8. May be the left hand of de-miner was out of PPE and during the accident his hand is injured.

9. In my opinion the section leader has performed his responsibility against the mentioned section properly.

Statement and Witness Report 4

[Assistant Team Leader (12 years experience).]

Questions:

1. Please give information about your daily tasks and responsibility in the team?
2. Please give information about the happening of accident and its exact time?
3. Please give information about the personal life and de-mining experience of victim?
4. How many mines have been found in the mentioned task and how many of these mines were found by this de-miner till now?
5. In your opinion what was the main cause of the accident?
6. In your opinion were there any ways to prevent such accidents if yes? What are they?
7. During the mine accident where was your location, and when you reached to accident point?
8. Did the mentioned deminer properly use the PPE during the accident?
9. Please give information about the damaged equipments during this accident?
10. In your opinion did the mentioned area prepare by backhoe machine properly?
11. According to the answer of sixth question what was the main problem for the backhoe machine in the mentioned area?
12. According to your experience did the mentioned deminer made any technical mistake during the prodding or it was the weak control of section leader caused the accident?
13. According to the victim deminer information the mentioned area didn't prepare by backhoe machine properly and mentioned deminer worked three wise on this point and the section leader had no attention to it. Is this good control of section Leader or not?
14. Most of the injuries of the victim were on his left side what is the main reason of this issue?

Answers:

1. My name is [name removed]. I am as Assistant Team Leader in MCT-20, [Demining group], my main responsibility is to check the equipment of deminers and during the explosion to take safety preparation according to procedure, and also controlling of two sections on the site is my responsibility.
2. The accident happened during the prodding on the mentioned deminer and the time was 10:55 am.
3. The deminer [the Victim] was very expert in his demining work and always he accepts the directions and his personally life is normal
4. 225 AP mines has been found in the mentioned task. The victim deminer found a mine in the last day and the mine which is blasted on the deminer was the second mine in the mentioned task.

5. My opinion is that the position of mine has changed and it is the cause of accident. When the bayonet touches with the mentioned mine during the prodding the accident happened.
6. In my opinion if deminer knew the area is hard and also the sound is depth, he must inform his section leader and we could soften the area with use of explosive.
7. I was with section No.4 and instruct the section leader because their area was prepared by backhoe. In this time the accident happened and I reached after a few minutes to the accident point, the victim was evacuated to the cleared area. He wore the PPE according to SOP.
8. The mentioned deminer was using the PPE properly all the time.
9. During the accident the following equipments were damaged: Apron, Helmet, and bayonet.
10. The entire mentioned area was cleared by backhoe which was closely observed by investigators.
11. As I mentioned before if the deminer was informing us about the hardness of the area we could soften the area by explosive.
12. The victim has made mistake during prodding he has not used the correct angle which cause the accident and about the control of Section Leader I was watching him and he controlled the deminers correctly.
13. If the statement of the victim is correct as he said that he has prodded three times on the mentioned fragment - if it is so then it is the mistake of Section Leader that he should controlled the deminer.
14. In my opinion according to the injuries of victim, the mentioned deminer has sat a sided and has not covered his left hand in PPE which caused a lot of injuries on his left side.

Analysis

The primary cause of this accident is listed as a “Management control inadequacy” because it seems that the Victim may have been using an inappropriate tool, may have been using an inadequate (brittle) visor and may not have been being controlled appropriately in the field. The secondary cause is listed as “unavoidable” because it may be that Victim was working properly and that the system in place made initiation inevitable.

The frequency of accidents in Afghanistan following land “prepared” mechanically is a cause for concern.

The “Inadequate equipment” listed under “Notes” refers to the visor, the design of which means that it breaks frequently during accidents (when other designs do not). The “Inadequate medical provision” listed under “Notes” refers to the fact that the CASEVAC took more than seven hours, which is an unacceptable breach of IMAS. The “Inadequate investigation” listed under “Notes” refers to the fact that the investigation was not detailed, very repetitive and frequently incoherent. The “Pressure to work quickly” is reported in the statements of deminers (see Statements).