11-12-2007

DDASaccident741

Humanitarian Demining Accident and Incident Database
AID

DDAS Accident Report

Accident details

Report date:	19/07/2011	**Accident number:**	741
Accident time:	10:40	**Accident Date:**	12/11/2007
Where it occurred:	EOD-12, Kolalan Village, Anaba District, Panjshir Province	**Country:**	Afghanistan
Primary cause:	Field control inadequacy (?)	**Secondary cause:**	Inadequate training (?)
Class:	Handling accident	**Date of main report:**	15/11/2007
ID original source:	(35)	**Name of source:**	UNMACCA and Demining group
Organisation:	[Name removed]		
Mine/device:	Fuzes (PD 120 mm/100)	**Ground condition:**	not recorded
Date record created:		**Date last modified:**	19/07/2011
No of victims:	2	**No of documents:**	1

Map details

Longitude:		**Latitude:**	
Alt. coord. system:	Not recorded	**Coordinates fixed by:**	
Map east:		**Map north:**	
Map scale:		**Map series:**	
Map edition:		**Map sheet:**	
Map name:			

Accident Notes

protective equipment not worn (?)

inadequate training (?)

Accident report

Two reports of this accident have been made available. The first is an internal report made by the demining group that suffered the accident, the second is a UNMACCA Lessons Learned document. The difference between their content is significant, and provides an illustration of the value of independent investigations. Made available as PDF files, their conversion into a DDAS file has led to some of the original formatting being lost. Text in square brackets [ ] is editorial. This record will be revised if more information becomes available.

The documents are reproduced below, edited for anonymity.

INTERNAL INVESTIGATION REPORT [Demining group], KABUL November 2007

1. Objectives

The objectives of the internal investigation into the Demining Accident are:

1. To gather evidence into the cause of the accident;
2. To identify factors which resulted in the accident;
3. To deliver the evidence to other staff within the organization;
4. To implement corrective and preventive actions to ensure that this type of accident does not occur again in the future;
5. To draw the attention of other staff to 100% implementation of standards.

2. General Information

Team/Site description: EOD-12, Central Region

Location of accident: Panjshir province Anaba district, Kolalan Village

MF/BF No: BAC task –AF0310/01020/BF002

Date & Time of accident: 12th November 2007 at 09:45 Am

Start date of task: 23 October 2007

Estimated Area of task: 300000 Sqm

Completion of task %: 6.3 %

3. Particulars of Injured Persons

Name: [Victim No.1], Title: EOD operator

Date of birth: 1972 - 35 Years old, Place of birth: Kondoz province, Blood group: B Rh+

Experience as EOD operator: 4 years. Qualifications: DM course, TL Course, [Demining group] EOD Level 1 course (AMAS Level 3+) and [Demining group] EOD Level 2 course (AMAS Level 1 and 2). These courses were present by [Demining group]. Last refresher training: Friday 09th November 2007. Refresher training on 10th July 2007 - Dealing with mines and UXO. Last EOD course: 5th August to 4th of September 2007 - EOD Level 1 Bomb Course.

Name: [Victim No.2], Title: EOD operator

Date of birth: 1977, 30 years old, Place of birth: Nangerhar province Surkh rood district. Blood group: B Rh+

Experience as EOD operator: 3 years. Qualifications: DM course, TL Course, [Demining group] EOD Level 1 course (AMAS Level 3+) and [Demining group] EOD Level 2 course (AMAS Level 1 and 2). These courses were present by [Demining group]. Last refresher training: Friday 09th November 2007. Refresher training on 10th July 2007 - Dealing with mines and UXO. Last EOD course: 5th August to 4th of September 2007 - EOD Level 1 Bomb Course.

4. Cause of the Accident

Explosion during the handling of a Point Detonating Fuse (PD 120mm/100mm Artillery) from BAC task hazardous area to field UXO collection point

During the handling of UXO from one operator to other operator the fuse has fallen to the ground and exploded.

5. Internal Investigation Team members:

1-TA: [Name removed]

2-S.Ops Manager: [Name removed]

3-S.Medical Officer: [Name removed]

4- Field officer : [Name removed]

5-Training/EOD.O: [Name removed]

6-IQA .O: [Name removed]

6. Investigation Procedure

a. During the internal investigation on the accident site, the accident point and the explosion crater was found, inspected and measured.

b. Information and written statements were received from the support staff including the section leader of MCT and EOD working on the above mentioned task.

c. The information and evidence gathered has been processed and analyzed to determine the cause of the accident.

7. Chronological Overview of Events after the Accident

Following describes the actions taken and the instructions given by the command staff directly after the accident:

Description	Time after Accident
12/11/2007	
Accident happened at	09:45
Operation of EOD-12 stopped	09:46
Team leader, paramedic and two operators got to the accident point	09:47
Paramedic started treating and doing the first aid to the injured	09:48
Radio room at main office got the report of accident	09:48
Patients were loaded into Ambulance and stabilized for 7 min both injureds	09:55
AMAC Central was informed by field officer Kabul	09:55
1st ambulance reached to Pnajsheer emergency hospital with an injured ([Victim No.2])	09:56
2nd ambulance reached to Panjsheer emergency hospital with an injured ([Victim No.1])	10:01
Internal Accident Investigation unit reached the accident site	11:35
Internal Accident Investigation unit reached to Panjshir emergency hospital	01:30
IMSMA Accident Report form was delivered to AMAC Central	17:00
13/11/2007	
External Accident Investigation unit (UNAMAC) reached the accident site	13 Nov, 10:20

8. Brief Description of Events Leading up to the Accident

Section No.1 of MCT 2 had started work on BAC task –AF0310/01020/BF002 located in Panjshir province Anaba district, Kolalan Village with the support of EOD Team No. 12 on 10 November 2007.

On 12 November 2007 Section No. 1 started its normal work and identified a PD fuse at Location 2 shown in the picture below.

[The Victims] - operators of EOD 12 - were following the MCT section for categorisation of marked UXO. The PD fuse located at Location 2 was categorized as safe and [Victim No.2] handled it from Location 2 onto the rock wall between himself and [Victim No.1] who was situated at Location 4. [Victim No.1] was to retrieve the PD fuse from the wall and move it to field UXO Collection Point. The PD fuse has fallen from the wall to the ground and detonated, resulting in the two casualties.

[The accident site]

Legend:

BAC searching line location during accident - 1

Marked UXO by BAC Section - 2

Handling of UXO by [the Victims] - 3

Accident point and [Victim No.1] location - 4

9. Brief Description of the Injuries

A. Patient 1 – [Victim No.1]

Left leg below Knee joint open fracture of Tibia shaft near to proximal end laterally. The bone fractured pieces were on multiple deferent lines but the fibula bone was remaining safe and secure.

Multiple fragmental wounds on:

- Small fragmental wounds on anterior view on right leg below knee joints
- Anterior view on left inguinal.

- Left infra chest medclaviculer lines both side.
- Anterior view brachial area proximal to shoulder.
- Anterior view on forearm proximal to elbow joints.

B. Patient 2 – [Victim No.2]

A small fragmental wound on anterior view of chest inferiorly (May chest hole) unknown.

10. On-Site Treatment of Casualties

Open the IV line and fixed the IV canola for both them.

Given the IV Fluids (Ringer Lactate) 1000 ml/each.

Irrigated the casualties' wounds with saline solution and immobilized the fracture by splint.

Dressed and maintained the wounds.

Applied Analgesic: Diclonat P 3ml/IM for M.Ayaz and , Pentonil 1ml dilute for [Victim No.1]

Applied Antibiotic: Vial Pan Ampicillin 1gr/IM for each them

11. General Condition of the Injured Persons:

Patient 1 – [Victim No.1]:

[Victim No.1] EOD operator health conation was successfully. The wounds were irrigated and redressed by hospital staff in Operation Tether the fracture was reeducated and leg was splinted by plaster now he was admitted in Panj sheer hospital. The patent condition was 2nd priority.

Patient 2 – [Victim No.2]:

After accident he was serious because if he had chest hole if fragment come inter pleura he will become on 1st priority otherwise he is on fourth priority pt. Now he discharged from

hospital . He was under treatment in compound under follow of the Doctors he is in rest, he was on fourth priority.

12. Damaged Equipment/materials

Uniform of two operators pairs

13. Investigation Findings

- The accident occurred during a BAC task.
- The accident occurred during the handling process from one operator to another over uneven terrain
- The operator was handling the fuse and giving it to another operator because of the natural barrier (rock wall) between them.
- The box has fallen to the ground and resulted in the detonation of the fuse.
- The Section Leader of EOD 12 was 60m away from the point of detonation.

14. Conclusions

From the evidence gathered the following is clear:

Both of the casualties are experienced EOD Operators with several years experience and trained to [Demining group] EOD Level 1 (AMAS Level 3+)

The incorrect categorization of the UXO as being safe-to-move has been made by EOD Operator [Victim No.2].

The handling of the UXO by the EOD Operator [Victim No.2] has not been in accordance with the [Demining group] SOP.

The Section Leader [Name removed] was not providing the level of supervision required of a Section Leader to ensure that correct handling procedures were being used.

15. Lessons Learnt

The following lessons were learnt from this accident:

- The importance of diligent supervision by all supervisors during operations;
- The importance of the correct categorization of UXO before movement;
- The importance of correct and safe handling of UXO even if they have been categorized safe to -move.
- The importance of reinforcing the importance of safety during operations to all deminers and operators. Experienced operators can perform their tasks incorrectly or negligently.

A full day of refresher training was conducted the next day, 13 November 2007, for all MCT and all EOD teams. The training subjects included:

- BAC method and how to safely handle UXO from one location to another;
- The use of PPE during BAC;
- Team supervision, command and control in accordance with [Demining group] SOP.

Attachments: [Not made available]

A copy of BAC task sketch map.

A copy of task order.

Last refresh training plan before accident.

Refresher training plan after accident.

10 Pages of inspection from the relevant staff.

Copy of IMSMA initial report.

A copy of discharge card for the [Victim No.2] operator.

Reported by: [Name removed] S. Ops Manager [Demining group], Date: 15.11.07

LESSONS LEARNED SUMMARY OF DEMINING ACCIDENT OCCURRED TO [Demining group] EOD-12 ON 12 NOVEMBER 2007

INTRODUCTION:

An investigation team composed of Mr. [Name removed] the QMA and [Name removed] AMAC OPS Assistant was convened by the Area Manager of AMAC Centre to investigate the demining accident that occurred on [Victim No.1] and [Victim No.2] EOD operators of [Demining group] EOD-12 at Kulalan Village, Onaba district of Panjshir province. The accident happened on 12 Nov 2007 at 09:45 hours in task#AF/0310/01020/BF002.

SUMMARY:

BAC task # AF/0310/01020/BF 002 is part of SHA#4 of impact survey IS#219. There was an ammunition store in the area and it was demolished during the period of Taliban regime and as a result the UXOs scattered around. According to request of the locals the clearance of the task was started on 23 October 2007 by [Demining group] DT# 02 supported by EOD# 12. On 12 November at 9:45 hours two EOD operators were busy at the site to shift some detected UXO to collection point and as one of them ([Victim No.2]) wanted to pass three fuses (PD 120 mm/100) to [Victim No.1] who was about 2.5 meters away and threw them toward him, the fuses fell on the ground next to [Victim No.1] and exploded. As a result of the explosion [Victim No.1] got left leg upper side fraction, knee lower side bone fractions and also he got different superficial injuries to other parts of his body. Meanwhile [Victim No.2] got some injuries to his chest. After applying first aids both casualties were shifted to Panjshir emergency hospital. [Victim No.1] is under treatment and [Victim No.2] was discharged from hospital on 13 November 2007.

CONCLUSIONS:

The following points were found by investigation team:

- The two EOD operators were shifting the detected UXO after categorization, but they were not dressed with PPE which shows poor control of team command group.
- The team leader of the team incorrectly categorized the three fuses as inactive and safe to move, but actually they were not inactive.
- One of the EOD operators threw the fuses to the other and caused it to explode, which shows his carelessness in regard to safety standard.
- The investigation team met [Victim No.1] in the hospital and according to his narration; [Victim No.2] the other EOD operator was playing with the UXO, joked and threatened him by throwing the UXO toward him and the explosion happened.

- The team leader of the team was located about 50m away from the accident point and could control the activities of the team, but he failed to avoid [Victim No.2] not make joke and play with the UXO. It shows weak command and control of the team command group.

RECOMMENDATIONS:

The following points are to be considered:

- Refresher training is recommended for the team and the training should focus mainly on UXO categorization and methods for safely handling of the UXO.
- Making jokes, playing with UXO and carelessly handling of UXO during demining operation will have undesirable consequences and must be stopped.
- The team's command group should not ignore the safety breach done by team members; instead they should strongly implement approved procedure and safety standard during demining operation.
- [Demining group] relevant field office is to enhance internal QA visits of the teams in order to improve team demining outcomes and make sure the command groups have the ability to maintain safety standard and control of team activities properly.

Victim Report

Victim number: 931
Name: [Name removed]
Age: 35
Gender: Male
Status: deminer
Fit for work: not known
Compensation: Not made available
Time to hospital: 16 minutes
Protection issued: Frontal apron
Long visor
Protection used: None

Summary of injuries:

INJURIES: minor Chest; minor Leg; severe Arm; severe Leg

COMMENT: No Medical report was made available. See details in text of the internal report.

Victim Report

Victim number: 932
Name: [Name removed]
Age: 30
Gender: Male
Status: deminer
Fit for work: not known
Compensation: Not made available
Time to hospital: 11 minutes
Protection issued: Frontal apron
Long visor
Protection used: None

Summary of injuries:

INJURIES: severe Chest

COMMENT: No Medical report was made available. See details in the text of the internal report.

Analysis

The primary cause of this accident is listed as a *Field Control Inadequacy* because the Victims were working without PPE and apparently playing silly games with explosive items, but their errors were not corrected. The secondary cause is listed as *Inadequate training* because the fuzes were wrongly identified as being safe, and the demining group conducted some refresher training as a result.

The difference between the reports – throwing fuzes or placing one delicately on a wall and it falling off – do not necessarily imply that the demining group's internal investigators sought to mislead. It is more likely that the Afghan external investigators simply knew how to get the truth when they interviewed the main Victim in hospital.

The internal report included photographs of blood-stained uniforms which, combined with the injury photographs, proving that no PPE was being used. This is not unusual in EOD tasks but the fact that fuzes feature in many EOD accidents indicates that the wearing of PPE is worthwhile even if the detonation of the main devices would defeat that PPE.

Working distances on EOD Tasks are usually dictated by the risk assessment's view of the likelihood of any device detonating, so it is likely that the working distance requirement was not being breached in this accident.

The Internal Investigation by the demining group appears professional and timely, with reasonable Lessons Learned, but the contrast between its findings and those of the external UNMACCA investigators illustrates the value of an external investigation. If the UNMACCA has made their full report available, that might have enhanced the lessons that could be learned, but the UN supported MACCA has failed to make full reports available for some years, so ignoring the requirements of the IMAS. It is noteworthy that the Afghan national staff have been more responsible over sharing data than those internationals who presume greater responsibility.