12-22-2010

DDASaccident719

Humanitarian Demining Accident and Incident Database
AID

DDAS Accident Report

Accident details

Report date: 08/07/2011

Accident number: 719

Accident time: 09:30

Accident Date: 22/12/2010

Where it occurred: AF/0112/00169, MF355, Shpoli Baba Village, Sorubi District, Kabul Province

Country: Afghanistan

Primary cause: Field control inadequacy (?)

Secondary cause: Management/control inadequacy (?)

Class: Other

Date of main report: Not recorded

ID original source: None

Name of source: UNMACCA

Organisation: [Name removed]

Mine/device: PMN AP blast

Ground condition: hard

rocks/stones

steep slope

Date record created:

Date last modified: 08/07/2011

No of victims: 1

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

inadequate area marking (?)

Accident report

A Board of Inquiry report and a Lessons Learned document have been made available. Their conversion into a DDAS file has led to some of the original formatting being lost. Text in square brackets [ ] is editorial.

The documents are reproduced below, edited for anonymity.

BOARD OF INQUIRY ABOUT FATAL DEMINING ACCIDENT of [the Victim] deminer of [Demining group] DT-13

INTRODUCTION

Dr [Name removed], Programme Director for the Mine Action Coordination Centre of Afghanistan (MACCA) convened a Board of Inquiry (BOI) team to investigate the circumstances involved in the demining accident causing fatal injuries to [the Victim] the deminer of [Demining group] DT-13.

The BOI comprised the following personnel:

Dr. [Name removed] Chief of QM MACCA: Chairman

[Name removed]: Member

[Name removed]: Member

[Name removed] from [Demining group] Observer

A copy of the appointment of personnel to carry out the formal investigation including the BOI Terms of Reference is at Annex A to this report.

GEOGRAPHY AND WEATHER

The accident occurred on 22 Dec 2010 in MF # AF/0112/00169/MF 355 located in Shpoli Baba village, Sorubi district of Kabul province to the east side of Kabul city at the begging of Mahipar Pass closed to Mahipar Power plant. This is a rocky area, hillside with a steep sloping terrain. It is cold in winter season, but due to lack of snowfall this year, the weather is suitable for demining operations. The ground is medium in terms of hardness and dry. The area is lightly bushy. Accident happened in a clear and calm weather.

Priority of Task

Although 8 accidents happened there on local people and on their animals since 1980, and the clearance of the area is requested by Government and is covered in [Demining group] plan, but the priority of the task is identified as low.

SITE LAYOUT AND MARKING

The site marking was visible, the admin area was well arranged and visible, but the access lanes were not well prepared and marked. This point was not raised during the internal and external QA visits.

MANAGEMENT, SUPERVISION AND DISCIPLINE ON SITE

Although the site layout, deployment of deminers, safety distance, medic post, admin area, control point and vehicle parking area were well managed. But as the area was steep sloping and extra safety and precautionary measures in terms of preparing steps for deminers' stabilization and using ropes/sticks to tie deminers during the operations were not considered. These precautionary measures were discussed by operations assistant, but the team command group refused and said that the nature of is loose and sticks will not be driven to the ground to tie the rope with.

QUALITY ASSURANCE AND QUALITY CONTROL

Internal QA was conducted on 20/12/2010 and external site visit was conducted by AMAC relevant Operations Assistant on 29/11/2010 which was the second day of the team deployment in this task. The result of this visit was CR.

COMMUNICATIONS AND REPORTING

The communication between team, sub-office and organization HQ was maintained very well.

MEDICAL REPORTS

The medical report of ICRC hospital Pakistan/Peshawar is available. [Not made available.] The report states that the victim deminer died due to head trauma and internal chest injuries which caused broncho-pneumonia and septicemia leading to cardio-respiratory failure.

WITNESS INTERVIEWS AND STATEMENTS

The team leader, assistant team leader, the team medic and nearest deminer to the accident point were interviewed by external investigation team and statements are attached as Annex E. [Not made available.]

DETAILS OF THE MINE/ERW INVOLVED

It was a Russian made anti-personnel PMN mine.

EVIDENCE OF RE-MINING

No evidence of re-mining.

EVIDENCE OF SITE INTERFERENCE OR TAMPERING AFTER THE ACCIDENT

The accident site was not tempered.

PERSONAL PROTECTIVE EQUIPMENT

The deminer was dressed with PPE and visor. He got fatal injuries due to falling around 200 meters down in a rocky area.

USE OF MINE DETECTION DOGS (MDD)

Not suitable.

USE OF Mechanical MACHINES (MDU)

Not suitable.

DATE OF LAST REVISION COURSE FOR TEAM INVOLVED IN THE ACCIDENT

At the beginning of each mission [Demining group] teams are subject to one day refresher course and the last course was held on 27 Nov 2010 in Sorubi base camp, but [Demining group] representative was not able to provide documentary evidence to confirm [the Victim]'s presence in mentioned refresher course. The BOI team received a record of weekly technical review which is being conducted by team command group in the base camp on Fridays, [the Victim] was present in that course.

DETAILS OF MEDICAL EVACUATION AND TREATMENT

After the accident happened, on 09:30 and the deminer fall down from accident point to the bottom of cliff, the first aids started by paramedic at 9:35 am and as the road leading to Kabul city was blocked by heavy traffic, so the team decided to evacuate the victim to Jalalabad. By 9:55 am the victim was ready to be shifted to Sorubi district Hospital and then Jalalabad Public Health Hospital. He was admitted at district hospital at 10:30 am. After some stabilization and control of bleeding, at 12:00 the victim transferred to Jalalabad public health hospital. On 13:00 he was admitted there, after the operations completed on his injuries and further stabilization, the [Demining group] was advised by doctors to transfer the injured deminer to Pakistan. He was transferred from Jalalabad hospital to Peshawar (Pakistan) on the next day 23/12/2010 at 7:00am. He passed away in ICRC hospital on 31/12/2010 at 1:00 pm.

PARTICULARS OF DEMINERS INSURANCE

The [Demining group] staff including deminers are insured with State life insurance company of Pakistan.

DETAILED ACCOUNT OF THE ACTIVITIES ON THE DAY OF THE ACCIDENT

On 22 December 2010 team arrived to the area on 06:30 and started operation on 07:00 working for 45 minutes and then 15 minutes break, the second round started on 08:00 for the same working and breaking period. The third round started on 09:00, [the Victim] worked in his clearance lane using metal detector and then stopped on 09:25 wanted to mark his clearance lane. He picked up marking material/equipment attempted to mark his clearance lane. On the way back he slipped out from his cleared lane to un-clear area, his right foot came on a mine and the accident happened.

TECHNICAL POINTS CONTRIBUTED TO ACCIDENTS

The deminer slipped to un-clear area while attempting to mark his cleared lane, his foot came on a mine and the accident occurred. But the causes of his death seem to be fatal injuries sustained when he had fallen to the bottom of cliff from the accident point around 100 meters down. Operations assistant from AMAC central discussed risk preventive measures with [Demining group] after the accident happened and recommended that the ropes should be used to tie in deminers during the operation in order to stop them falling in the event of accident or slip. But due to loose nature of the ground in some parts of the minefield this was not applicable. AMAC conducted QA visit at the beginning of the task, he discussed the risk mitigation measures in such a way to reduce the target from 500 sqm area to 250 sqm per day and conduct full excavation and create staircases to stable the deminers during the operations in such a steep sloping area.

[Demining group] developed SOP for working on steep sloping areas, but the risk reduction and or safety precaution in such a way to use ropes which has been practicing by other organizations is not covered there. This was not applicable at the beginning of the task due to ground conditions.

The team practiced CASEVAC 2 times before accident happened, but the detail of evacuation planned, accident point and communication is not clear. It is not clear whether the rehearsal conducted only from the foot of the cliff to the hospital or from the upper part where the deminers are busy. The alternative evacuation root is also not mentioned.

Although it was planned by [Demining group] to evacuate the victim to Kabul city which was close to the working site, but due to traffic jam in Mahipar pass, [Demining group] decided to evacuate the victim to Jalalabad. So the evacuation took almost 3 hours to Jalalabad and next day the deminer was evacuated to Pakistan for specialised treatment, therefore, the delay in evacuation of victim may also had contributed to the severity of his injuries and so led to his death.

SUMMARY

The accident happened while the de miner was attempting to mark his cleared lane. He slipped to un-clear area and his foot came on PMN mine and caused the accident. This explosion also caused the victim to fall down about 100 meters to the bottom of cliff from the accident point and get more crush injuries which seem to be the causes of death.

CONCLUSION

Carelessness of deminer and lack of comprehensive risk assessment in difficult worksite conditions resulted in accident and subsequent death of deminer.

RECOMMENDATIONS TO PREVENT REOCCURRENCE

- [Demining group] operations department is recommended to include the use of rope and sticks and creating staircases in their related SOPs and make sure its implementation where applicable in such steep sloping areas.
- Internal QA cell of [Demining group] is recommended to improve the QA visits in order to catch such critical issues and make sure that a comprehensive risk assessment is done and risk mitigation measures are considered by the team.
- The CASEVAC rehearsals should be conducted more objectively and include all possible scenarios as per all possible risks and worksite conditions. The alternative plans for evacuation should also be included.
- The command group is recommended to implement a strict control on deminers at all times during the operations especially in such complicated areas.
- The deminers should take extra care during the operations and do not ignore standard operating procedures and risk mitigation measures.

Dr. [Name removed], BOI Chairman

ANNEXES: [Not made available]

Annex A: BOI - Terms of Reference

Annex B: Site operations plan

Annex D: Internal investigation report

Annex E: Statements and Witness reports

LESSONS LEARNED SUMMARY OF [Demining group] FATAL DEMINING ACCIDENT

INTRODUCTION:

A Board of Inquiry (BOI) was convened by MACCA Programme Director to investigate the circumstances involved in the demining accident causing fatal injuries to [the Victim] the deminer of [Demining group] DT-13. The accident occurred at 09:30 on 22 Dec 2010 in MF # AF/0112/00169/MF 355 located in Shpoli Baba village, Sorubi district of Kabul province.

SUMMARY:

The accident occurred in task number 355 in a rocky area which is a hillside with a steep sloping terrain. The deminer was busy in marking of his cleared lane, slipped to un-cleared area, his right foot came on PMN mine and the accident happened. The deminer [the Victim] closed his cleared lane 09:25 and wanted to mark it, he came down to his starting lane, took the marking materials and went back to start marking. On 09:30 when he was busy in marking the stones on the edge of his clearance lane, due to loose nature of the ground and slope there, he slipped to un-cleared area where his right foot came on a PMN mine and caused the mine to go off and the accident happened. At the result of explosion he lost his right foot from below knee and fell down to the bottom of cliff and sustained more injuries including head trauma and other internal injuries during this falling down event.

Finally the deminer died in hospital on 31 Dec 2010, the causes of his death seem to be the complications of severe injuries sustained when he had fallen down to the bottom of cliff from the accident point.

CONCLUSIONS:

Carelessness of deminer and lack of comprehensive risk assessment and difficulties in worksite conditions resulted in accident and subsequent death of deminer.

RECOMMENDATIONS:

The following points are to be considered:

- [Demining group] operations department is recommended to include the use of rope and sticks and creating staircases in their related SOPs and make sure its implementation where applicable in such steep sloping areas.
- Internal QA cell of [Demining group] is recommended to improve the QA visits in order to catch such critical issues and make sure that a comprehensive risk assessment is done for each worksite and risk mitigation measures are considered by the team.
- The CASEVAC rehearsals should be conducted more objectively and include all possible scenarios as per all possible risks and worksite conditions. The alternative plans for evacuation should also be included.
- The command group is recommended to implement a strict control on deminers at all times during the operations especially in such complicated areas.
- The deminers should take extra care during the operations and do not ignore standard operating procedures and risk mitigation measures.

Feedback on any preventive and corrective actions taken by [Demining group] is required to be submitted to the MACCA office by no later than 7 days, effective to the issue date of this letter.

Victim Report

Victim number:	911	**Name:**	[Name removed]
Age:		**Gender:**	Male
Status:	deminer	**Fit for work:**	DECEASED
Compensation:	Not made available	**Time to hospital:**	210 minutes
Protection issued:	Frontal apron; Long visor	**Protection used:**	Frontal apron; Long visor

Summary of injuries:

INJURIES: severe Chest; severe Head

AMPUTATION/LOSS: Leg Below knee

FATAL

COMMENT: No Medical report was made available. "victim deminer died due to head trauma and internal chest injuries which caused broncho-pneumonia and septicemia leading to cardio-respiratory failure" nine days later.

Analysis

The primary cause of this accident is listed as a *Field Control Inadequacy* because the investigators found that the site layout, lane marking and clearance plan were unsatisfactory. The Victim may have stepped outside the cleared area without knowing he was doing so. The secondary cause is listed as a *Management Control Inadequacy* because the procedures in use were inappropriate for the terrain and the group’s management should have ensured that this was not the case.

The delayed CASEVAC was unfortunate and may have contributed to the Victim’s demise. If the demining group had not conducted an appropriate CASEVAC exercise, that should have been corrected.