9-14-2010

DDASaccident655

HD-AID
Humanitarian DeminingAccident and Incident Database

DDAS Accident Report

Accident details

Report date: 05/03/2011

Accident number: 655

Accident time: 10:45

Accident Date: 14/09/2010

Where it occurred: MF 404, Ramtha Village, Irbid Province

Country: Jordan

Primary cause: Field control inadequacy (?)

Secondary cause: Inadequate training (?)

Class: Excavation accident

Date of main report: Not recorded

ID original source: None

Name of source: Demining group

Organisation: **[Name removed]**

Mine/device: M35 AP blast

Ground condition: grass/grazing area
rocks/stones

Date record created:

Date last modified: 05/03/2011

No of victims: 1

No of documents: 2

Map details

Longitude:

Latitude:

Alt. coord. system:

Coordinates fixed by:

Map east: 36.02630 E

Map north: 32.62593 N

Map scale:

Map series:

Map edition:

Map sheet:

Map name:

Accident Notes

no independent investigation available (?)

standing to excavate (?)

use of rake (?)

visor not worn or worn raised (?)

long handtool may have reduced injury (?)

inadequate training (?)

Accident report

An internal demining group accident report was made available. The conversion into a DDAS file has led to some of the original formatting being lost. Text in square brackets [ ] is editorial.

The internal report is reproduced below, edited for anonymity.

Incident investigation [Demining group] – MINE ACTION TEAM - JORDAN

GRID REF: 32.62593 N: 36.02630 E. MINEFIELD NO – 404, minefield TASK ID - ramtha 4

Investigation conducted by – [Demining group], [Name removed] (OPSCO), [Name removed]

Deminer: [the Victim], DATE OF BIRTH: 22 Feb 1986,NIC No: [Removed]

TEAM LEADER: [Name removed], Team: Delta

TIME OF INCIDENT: 10:50, DATE OF INCIDENT: 14 Sept 2010

NATURE OF INJURY: Eyes lid and lips slightly injured

TYPE OF MINE: M35 AP Mine

IMSMA DETAILED REPORT FOR MINE INCIDENT, Tuesday, 14 Sept 2010

Part 1 – Description of the incident

1. Organisation name: [Demining group], JORDAN. Team No: Delta

2. Incident date: 14 Sept 2010. Time: 10:45

3. Location of incident: NW SECTOR, Province: Irbid, Village: Ramtha, Project or task No: Ramtha 4

4. Name of site manager or team leader: [Name removed]

5. Type of incident: Uncontrolled detonation of a mine.

6. Device was detonated by: Deminer

7. Device detonated while: Raking with Heavy Rake

8. Device was found in an area classified as: a known Hazardous Area

9. Narrative (Describe how the incident happened. Attach additional pages and photographs or diagrams to assist in clarifying the circumstances surrounding the incident):

Deminer was approaching 9 O'clock M35 AP mine on one of the main mine belt clusters, after she removed the AT mine she located the M35 mine and started to excavate beside the mine, accidently she hit the mine by the heavy rake and caused the blast

Part 2 – Injuries

10. Did the incident result in any injuries? Yes

11. List people injured and nature of injury

Name	Occupation	Injury
[The Victim]	Deminer	Eyes lid and lips slightly injured

Part 3 – Equipment damages

12. Did the incident result in any damage to equipment or property? Yes

13. List any mine action equipment or property damage: Heavy Rake, Damaged (Not Reusable)

14. List damage to equipment or property owned by a member of the public or the government. Include contact details of the owner or responsible person. Heavy Rake, Damaged (Not Reusable)

Part 4 – Explosive hazard

15. Provide details of mines/UXO/ other devices that were involved in the incident.

Device Type:	Method:	Determined by:
AP (Blast) Mine	Surface	RAKING

16. State specific device (if known): Anti-Personal Mine, M35

17. Comments (include measurements of any crater resulting from the explosion): Crater Depth: approx. 10 cm / Width: approx. 35 cm.

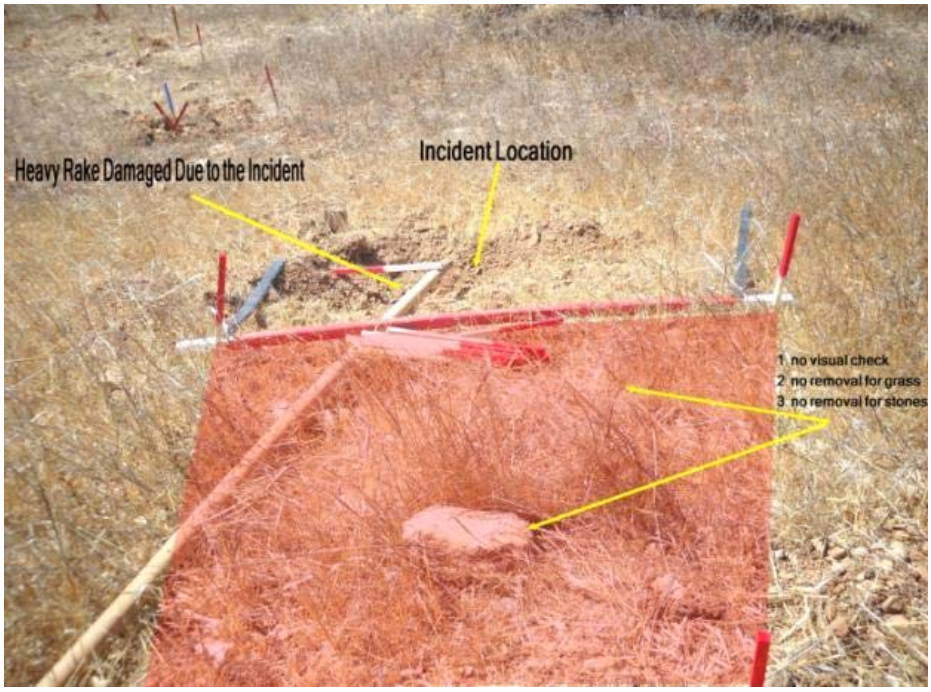
Part 5 - Site conditions

18. Describe the conditions at the site at time of the incident

Ground/Terrain: Medium hard, Flat

Weather: Clear, hot

Vegetation: Medium, grass



[The accident site, showing how the SOPs were being breached.]

Part 6 – Team and task details

20. Qualifications of Member(s) involved in the incident:

Name	Position in Location	Occupation
[The Victim]	Deminer	Deminer

21. How long had this team been?

a. At this site? 2.5 Months

b. working on this task? 2.5 Months

c. working on the day? 3 Hours & 45 minutes

22. Detector type: F3. Serial Number: N14 673 (17). Detector status: Functional. Passed to [Name removed] for technical inspection at Ramtha 4 Site on [No date]. Tripwire feeler used? No

23. Hand tool: HEAVY RAKE

24. PPE: Vest, Visor, [Blast boots]. [A photograph if the Victim's Mask Visor shows it pristine, with no dust or marks, from which I conclude that it was not worn at all: a Mask-Visor cannot be worn raised.]

25. Comments: The Deminer was not wearing the visor in the proper way.

Part 7 - Medical & First Aid

Medical treatment required? Yes

26. Medical Support at Incident Site: Medic, 1st Aid Kit, Stretcher, Ambulance, Radio to call forward medic.

27. Was a Mine Incident Drill carried out? Yes

28. Time and distance data

a. Time from incident to SECTION MEDICAL POINT: (5) minutes

b. Time spent at site administering treatment: (10) minutes

c. Time from evacuation FROM to arrival King Abdullah Hospital: 20 minutes

Part 8 – Reporting procedures

Reported by: [Name removed], [Demining group] Jaber Office to: [Demining group] Offices & NCDR

Investigation conducted by: [Name removed] (OPSCO), [Name removed] (IQA)

Report compiled/translated by: [Name removed], [Name removed]

Verified by: [Name removed]

Finding

The deminer did not wear visor in a proper way and this is a breaching for SOP.

The deminer did not conduct visual check during approaching to the mine.

The deminer did not remove stones in the cleared box(breaching for SOP).

The deminer did not remove the grass in the cleared box (breaching for SOP)

The deminer did not approach to the mine as per as SOP.

The deminer did not use the proper tool to recover the mine,(she used heavy rake instead of light rake although the mine was totally above the ground).

Team leader did not pay enough attention for the deminer during the work.

Signed: Ops Coord

Operation Manager Recommendation

The incident happened due to individual mistake while the deminer was trying to handle the AP device (M35) remotely using the long handle RAKE then she couldn't control the RAKE and accidentally she pressed the pressure pin by the heavy RAKE and activated the device.

The deminer broke the safety by not wearing the face mask in the proper way and not handling the device with the proper tool (the grabber or the light RAKE).

No improvements needed to the procedures , and there is no need to change any of the used tools also there is no actions need to revise the supervision that the Team leader supervise 5 deminers in a flat and open area.

Its recommended to issue a warning for the TL that he didn't made sure that the deminer under his supervision and he have to make sure that she is totally working according to SOP and with her full PPE.

And a warning for the deminer that she didn't follow the SOP to approach the mine and didn't wear the face mask in the proper way which may affect here own safety.

Signed: Operations Manager, 10 Oct 2010.

Attachments:

Statements by Injured Members

Statements by Witnesses

Photographs of Injuries [The Victim refused to be photographed.]

Photographs of Incident Site

Copy of Incident Report

Copy of Medical Report

Victim Report

Victim number:	838	**Name:**	[Name removed]
Age:	24	**Gender:**	Female
Status:	deminer	**Fit for work:**	presumed
Compensation:	Not made available	**Time to hospital:**	35 Minutes
Protection issued:	Frontal apron Mask Visor blast boots	**Protection used:**	Frontal apron, blast boots

Summary of injuries:

INJURIES: minor Eyes, minor Face

COMMENT: A Medical report in Arabic is held on file. The Victim refused to have her injuries photographed.

Statements

Statement: the Victim

I remember that on 14/9/2010 we worked for three Classes after we took the morning safety brief from the team leader; I cleared 4 clusters (12 M35 AP mines), at the beginning of the 4th class they were working on burning mines and there were explosion sounds from the burning area so I rolled up the visor to look there , these explosions were distracting and disturbing me, then I continued working but didn't put the visor in the right way, I worked on 9 o'clock M 35 mine which was on the surface and I was progressing towards it from the left side when the accident happened and I don't know what happened next.

Q: Did you notice anything wrong about the exploded mine before you dealt with it?

A: Yes the mine was swelling and has some cracks like all the mines there.

Q: Do you know that dealing with unstable mines should be done by the HOBB?

A: Yes, I know that but since I worked in [Demining group] we never use this method.

Q: Have you ever cleared an unstable mine before?

A: Yes I did several times and since I started working on [Demining group] and we are using this method and the team leader knows.

Q: Were you working right following the SOP?

A: Yes I did.

Q: Did you remove grass and stones before progressing towards the mine?

A: Yes I did it all.

Q: How many times did the team leader check your work?

A: more than once.

Q: How much was the distance between you and the team leader?

A: More than 50 meters.

Q: Did the team leader see you working without wearing the visor?

A: No he didn't because he was on the area behind me.

Q: Did you tell about the disturbance you had because of the mine burning?

A: No we all didn't tell about it although it was affecting our work.

Statement 2: Team Leader

On 14/9/2010 we went to the work location and I gave the team the morning safety brief and distributed work for all deminers then they entered the field, 1st, 2nd and 3rd class were normal but at the beginning of the 4th part I was making QC on deminer [Name removed]'s work when I heard a sound of explosion and saw a huge dust from deminer [The Victim]'s site, I went there with deminers [Name removed] and [Name removed] to find her sitting on her location having some blood on the head area but I didn't make sure of her injury because she was wearing Hijab, we evacuated her walking then came the ambulance and first aided her.

Q, A:

Q: Was the injured wearing all her PPE?

A: I don't know if she was wearing the visor at the accident moment but she is committed to wearing all the tasks usually.

Q: Was she working right and following SOPs?

A: Yes, she was.

Q: Was she having all her PPE and working according to procedures?

A: Yes she was.

Q: What kinds of mines in that area?

A: AP M14+M35 and AT MK5.

Q: What is the average of the mine depth on the area?

A: Most of them on 10 Cm depth.

Q: Did you check on her work and made QC on it before the accident?

A: Yes I did on the 3rd part before the break.

Q: Did you notice any weird behaviour on her?

A: No I didn't.

As a continuance of the investigation further questions asked from the TL [Name removed]:

Q: What is the procedures which you do when an unstable mine is found inside the mine field?

A: The clearance coordinator will be informed and the mine will be burned by the burners inside the minefield using the HOBB.

Q: Does the team get any disturbance due to the explosions happens during burning the mines?

A: No, there is no any disturbance occurs due an explosions of a mine in the burning area.

Statement 3: Witness deminer

I remember on 14/9/2010 we went to the work location and the team leader gave us the safety brief and we worked 1st, 2nd and 3rd class normally, then at the beginning of the 4th part around 10:40 am I was working near the deminer [the Victim] and the distance between us was 20 m, I was searching for a missing mine when I heard a sound of explosion I looked at [the Victim's] site to see huge dust, I put the detector on the ground and went to her, I found the team leader and deminer [Name removed], the injured was setting on the ground on the centre lane and there was blood on her face, we evacuated her walking to the ambulance then they took her to the hospital after 1st aid.

Q, A:

Q: Was the injured wearing all her PPE?

A: Yes, she was.

Q: Did you notice on her that she was working right following the procedures?

A: Yes I did, she was working right.

Q: Did she have all the clearance tasks?

A: Yes she had them all since the morning.

Q: What was the mine depth on that area?

A: Around 10 Cm.

As a continuance of the investigation further questions asked from the Deminer [Name removed]:

Q: What is the procedures which you do when an unstable mine is found inside the mine field?

A: The Team leader will be informed and the mine will be burned by the burners inside the minefield using the HOBB.

Q: Does the team get any disturbance due to the explosions happens during burning the mines?

A: No, we don't face any disturbance due to that reason.

Analysis

The primary cause of this accident is listed as a *Field Control Inadequacy* because the findings of the investigator were that the Victim was breaching SOPs in six different ways when the accident occurred and criticised the Team Leader for not paying enough attention to the deminer's work. The secondary cause is listed as *Inadequate Training* because the statement of the Victim indicates that she did not know she was in breach of SOPs (apart from not wearing the Mask Visor). Her failure to understand the need to record her injuries was also an indication of inadequate training (or poor employee selection). The Victim's claim to have been distracted by the sounds from the mine burning also imply inadequate preparation for the task.

The demining group who made this report available is thanked for its transparency and its professional concern to share lessons that can be learned from accidents. This record, along with several other records where rakes were used, provide compelling evidence that the controlled use of rakes can be both effective and tolerably safe (reducing risk of severe injury to tolerable levels).