# DDAS Accident Report

## Accident details

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|---|---|---|---|
| **Report date:** | 04/03/2011 | **Accident number:** | 599 |
| **Accident time:** | 14:00 | **Accident Date:** | 01/02/2010 |
| **Where it occurred:** | Jabir 3(369B), NBP East Sector, Almafraq | **Country:** | Jordan |
| **Primary cause:** | Field control inadequacy (?) | **Secondary cause:** | Unavoidable (?) |
| **Class:** | Excavation accident | **Date of main report:** | |
| **ID original source:** | | **Name of source:** | Demining group |
| **Organisation:** | **[Name removed]** | | |
| **Mine/device:** | M14 AP blast | **Ground condition:** | grass/grazing area |
| **Date record created:** | | **Date last modified:** | 04/03/2011 |
| **No of victims:** | 1 | **No of documents:** | 2 |

## Map details

| | | | |
|---|---|---|---|
| **Longitude:** | | **Latitude:** | |
| **Alt. coord. system:** | | **Coordinates fixed by:** | |
| **Map east:** | 36.20928 E | **Map north:** | 32.49732 N |
| **Map scale:** | | **Map series:** | |
| **Map edition:** | | **Map sheet:** | |
| **Map name:** | | | |

## Accident Notes

long handtool may have reduced injury (?)

no independent investigation available (?)

disciplinary action against victim (?)

use of rake (?)

## Accident report

An internal demining group Accident report was made available as a PDF file. 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 FOR [demining group] – MINE ACTION TEAM - JORDAN**

TASK NAME JABIR 3 (369B), NORTH BORDER PROJECT, EAST SECTOR

GRID REF: 32.49732 N; 36.20928 E; JABIR

MINEFIELD NO - 369B, MINEFIELD TASK ID - E369B JABIR 3.

INVESTIGATION CONDUCTED BY – [Demining group], [Name removed].

DEMINER: [The Victim], DATE OF BIRTH: 1 FEB 1967

NIC NO (ID NUMBER): [Removed]

TEAM LEADER: [Name removed]. TEAM: ALFA.

TIME OF INCIDENT: 02:00 PM, DATE OF INCIDENT: 1 FEB 2010

NATURE OF INJURY: Multiple Superficial Scratches in the Right hand

TYPE OF MINE: Anti Personnel M14

**IMSMA DETAILED REPORT FOR MINE INCIDENT Monday, 1 Feb 2010**

**Part 1: Description of the incident**

1. Organisation name: [Demining group], JORDAN Team No: Manual Team 3

2. Incident date: 01/02/2010; Time: 02:00 PM

3.Location of incident: EAST SECTOR, Province: ALMAFRAQ, Village: Jabir, Project or task No: E369b Jabir 3

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

5. Type of incident: M14 AP MINE uncontrolled detonation of a mine/UXO.

6. Device was detonated by: Deminer.

7a. Device detonated while: Raking with Heavy Rake.

8. Device was found in an area classified as: 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):

During the recovery of AP mine deminer hit the mine with the heavy RAKE which initiate the mine and caused the incident.

**Part 2 – Injuries**

10. Did the incident result in any injuries? Yes.

11. List people injured and nature of injury: [Name removed, the Victim, deminer]: Multiple Superficial Scratches in his right hand.

**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 (no serial no.), damaged (not reusable).

14. List damage to equipment or property owned by a member of the public or the government. None.

**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 Buried RAKING

16. State specific device (if known):M 14 AP MINE

17. Comments (include measurements of any crater resulting from the explosion)

Crater Depth: approx. 13 cm / Width: approx. 25 cm

**Part 5 - Site conditions**

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

Ground/Terrain: Medium hard, Flat

Weather: Cloudy

Vegetation: Heavy grass

Mine Blast Location

**Part 6 — Team and task details**

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

[Name removed] , Deminer. Manual Team 3

21. How long had this team been?

a. At this site? 2 month

b. working on this task? 2 months

c. working on the day? 6 Hours & 30 minutes

22. Detector type: F3, Serial Number: 14680. Detector status: Functional

Passed to [Name removed] for technical inspection at Jaber 3 Site (location) on 1st of Feb 2010 (date) Tripwire feeler used? No

23. Hand tool: HEAVY RAKE

24. PPE: Vest, Visor [the group usually wear blast boots, but there is no provision to enter this on the IMSMA form.]

25. Comments: [None]

**Part 7 - Medical & First Aid**

Medical treatment required: no.

26. Medical Support at Incident Site: Medic, 1st Aid Kit, Stretcher, Ambulance, Safety Vehicle, 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: (3) minutes

b. Time spent at site administering treatment: (4) minutes

c. Time from evacuation FROM to arrival King Abdullah Hospital: Not applicable.

**Part 8 – Reporting procedures**

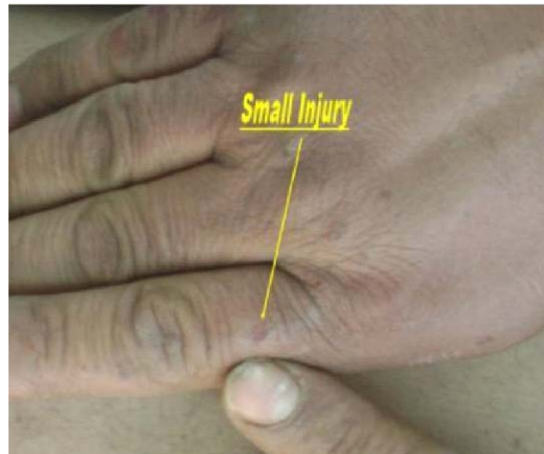
Reported by: [Name removed], [Demining group] Jaber Office to: [Demining group] Offices & NCDR

Investigation conducted by: [Name removed]

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

Verified by: [Name removed]

Injury




**Observation and Recommendation of Operations Manager**

1- I totally agree with the Investigation officer's Observation/Findings.

2- The Deminer not followed the proper drill and marking system.

3- The Deminer hit (hacking) the mine with heavy rake which resulted in mine blast.

4- It is recommended that the deminer has to be given a written warning.

[Name removed] Operation Manager

**Attachments:**

Statements by Injured Members: yes

Statements by Witnesses: yes

Photographs of Injuries: yes

Injury data sheet(s): yes

Photographs of Incident Site: yes

Copy of Incident Report: yes

Copy of Medical Report: yes [In Arabic, not translated]

## Victim Report

| | | | |
|---|---|---|---|
| **Victim number:** | 782 | **Name:** | [Name removed] |
| **Age:** | 43 | **Gender:** | Male |
| **Status:** | deminer | **Fit for work:** | yes |
| **Compensation:** | | **Time to hospital:** | |
| **Protection issued:** | Frontal apron<br>Mask Visor<br>blast boots | **Protection used:** | Frontal apron, Mask visor, blast boots |

**Summary of injuries:**

INJURIES: minor Hand

COMMENT: A medical report in Arabic is held on file.

## Statements

### STATEMENT 1: Investigating Officer

AP (M14) mine accident happened with deminer [The Victim] team (A), on Monday 01/02/2010 at 1400 Hrs. in section 15, task Jabir 3 ,MF ID 369B ,grids N:32.49732 E:036.20928.

FINDINGS

Through my visit to the accident location I found the following:

1. The marking system in the centre lane was not clear in the accident area due to the density of grasses.

2. The marking system with the cluster near the accident location was not as per as SOP (no entrance for that cluster). pic. No. 1

3. The deminer did not conduct the visual check because there is a big stone in front of the base stick inside the clearance box. pic. No. 2

4. The deminer did not remove the grass which covers the ground in the clearance box in front of the base stick and this is a breaching for SOP. pic.No.2

5. The approach for the target was not as per SOP because the depth of excavation was not more than 13 cm. pic.No.3

6. The deminer did not use the marking triangles to pinpoint the signals.

7. The wooden boxes were near the deminer with one AP defused mine inside.

8. The base stick was not as per as SOP because there is no white line on the straps. pic.No.2 9. The training mine with the live detonator for deminer [the Victim] which is used to calibrate the metal detector was left inside the MF instead of keeping it inside the team closet.

[Name removed] INVESTIGATION OFFICER

**STATEMENT 2: The Victim**

AP (M14) mine accident happened with deminer [The Victim] team (A), on Monday 01/02/2010 at 1400 Hrs. in section 15, task Jabir 3 ,MF ID 369B ,grids N:32.49732 E:036.20928.

[The Victim] declared:

After I recovered the main mine (AT M19) and AP mine M14 (12 o'clock direction) I started to recover AP mine M14 (3 o'clock direction) and after a while, I heard a signal, then I applied the standard procedures to investigate the signal and during my approach to the centre of the signal by the heavy rake, AP mine blew up and I did not fell down on the ground and I did not feel any type of pain, then I saw the TL coming to my site and I was just waiting for him to come, after TL reached my place we walked together outside the M F for the medic post.

[The Victim] was asked::

Q1.Did you apply the standard procedures to investigate the signal?

A1. Yes, I did.

Q2. Was you tired or have any problem with the team?

A2. No.

Q3. Did you do the visual check and cut the grass in the inspection box in front of you?

A3. Yes, I did.

Q4. Was the base stick as per as our SOP?

A4. Yes, but there was not white line on the straps.

Q5. Were the wooden boxes which assigned to carry the mines near your site?

A4. Yes, it was.

Q5. Who was the nearest deminer for your site?

A5. Deminer [Name removed].

Q6. Did you use marking triangles?

A6. Yes, I did.

I am [the Victim], hereby agree that I do not have any more information rather than what I mentioned here.

[Signed by the Victim and the investigating officer.]

**STATEMENT 3: Witness (Team Leader)**

AP (M14) mine accident happened with deminer [The Victim] team (A), on Monday 01/02/2010 at 1400 Hrs. in section 15, task Jabir 3 ,MF ID 369B ,grids N:32.49732 E:036.20928.

[Name removed], the leader for team (A), declared:

While I was handing over the recovered mines in my area to the burning team in section 17, I heard a mine explosion inside the MF and when I looked toward the sound I realized the accident happened with the deminer [The Victim]. Then I walked toward his place and directly informed the medic and clearance coordinator as per as SOP.

When I reached deminer [The Victim] he was standing on his legs and wearing his PPE and goggles and It was not any type of injuries except a minor injury in his right hand, so we walked together out side the MF for the medic post.

[The witness] was asked:

Q1. Did you brief your team about the safety and procedures inside the MF?

A1. Yes, this is our routine dally.

Q2. How do you see the performance of deminer [The Victim]?

A2. [The Victim] is a good deminer and did work all the time as per as our SOP.

Q3. Did you conduct QA and QC for deminer [the Victim] today?

A3. Yes, I conducted QA and QC for [the Victim] and his progress today and I did not find any notes.

Q4. Did you notice or heard any problems happened with [The Victim] today?

A4. No, he was aware about the situation.

I am [Name removed], hereby agree that I do not have any more information rather than what I mentioned here.

[Signed by the witness and the investigating officer.]

**STATEMENT 4: Witness**

AP (M14) mine accident happened with deminer [The Victim] team (A), on Monday 01/02/2010 at 1400 Hrs. in section 15, task Jabir 3 ,MF ID 369B ,grids N:32.49732 E:036.20928.

[Witness] Declared:

While I was doing my work In section 16, around 60 meters far from deminer [The Victim], I heard an explosion then I looked to the explosion site, directly I know an accident happened with deminer [The Victim] then I took the blanket and went to [The Victim] site. I reached there with the TL and all of us left the accident site to the medic post.

[The Witness] WAS ASKED:

Q1. Did you notice any injuries with [The Victim]?

A1. Yes, I saw small injury in his right hand and some dust on his PPE.

Q2. Was he complained from anything?

A2. No.

Q3. Did you notice anything with [The Victim] before the accident?

A3. No, I did not notice anything and he was not upset.

I am [Name removed], hereby agree that I do not have any more information rather than what I mentioned here.

[Signed by the witness and the investigating officer.]

## Analysis

The primary cause of this accident is listed as a *Field Control Inadequacy* because the investigators found that the Victim was not working to his SOP and his errors were not corrected. The secondary cause is listed as *Unavoidable* because the deminer may have been used the rake correctly and still initiated the mine. The method of excavation with a long-handled rake keeps the deminer a safer distance from an initiation, but the distance also makes it harder for him to see things on the ground. The controlled use of these rakes in this demining group's raking procedure *may* increase the chance of an unintended initiation, but the accident record shows that the distance between the AP blast and the deminer prevents serious injury in all instances where the procedure is correctly applied.

It is strange that the Operations Manager recommended that the Victim be given a written warning for breach of SOPs, but did not recommend warning his Team Leader who should have ensured that the Victim was working correctly.

The demining group's concern to investigate and share accident reports indicates a commendable professionalism.