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### DDASaccident720

HD-AID

*Humanitarian Demining Accident and Incident Database*

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# DDAS Accident Report

## Accident details

<b>Report date:</b> 08/07/2011	<b>Accident number:</b> 720
<b>Accident time:</b> 10:29	<b>Accident Date:</b> 21/03/2011
<b>Where it occurred:</b> Sabha 11/(384), Kum Al Ruff Village, Mafrq Province, Sector East	<b>Country:</b> Jordan
<b>Primary cause:</b> Field control inadequacy (?)	<b>Secondary cause:</b> Unavoidable (?)
<b>Class:</b> Excavation accident	<b>Date of main report:</b> None
<b>ID original source:</b> None	<b>Name of source:</b> Demining group
<b>Organisation:</b> [Name removed]	
<b>Mine/device:</b> M14 AP blast	<b>Ground condition:</b> dry/dusty grass/grazing area rocks/stones
<b>Date record created:</b>	<b>Date last modified:</b> 08/07/2011
<b>No of victims:</b> 1	<b>No of documents:</b> 2

## Map details

<b>Longitude:</b>	<b>Latitude:</b>
<b>Alt. coord. system:</b>	<b>Coordinates fixed by:</b> GPS
<b>Map east:</b> 36. 44315 E	<b>Map north:</b> 32. 37215 N
<b>Map scale:</b>	<b>Map series:</b>
<b>Map edition:</b>	<b>Map sheet:</b>
<b>Map name:</b>	

## Accident Notes

Inadequate detector pinpointing  
no independent investigation available (?)  
inadequate investigation (?)  
standing to excavate (?)  
use of rake (?)

## **Accident report**

The demining group made their internal report of this accident available in April 2011. Its 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: Sabha 11/ ( 384 )

GRID REF: 32. 37215 N, 36. 44315 E

Investigation conducted by – [Demining group] (Internal QA Officer)

Victim deminer: [Name removed]: DATE OF BIRTH: 07-Sep-1967

TIME OF INCIDENT: 10:29 hrs: DATE OF INCIDENT: 21 march 2011

NATURE OF INJURY: Multiple scratches on the left hand fingers and Left forearm, and 2 cm superficial wound in left arm.

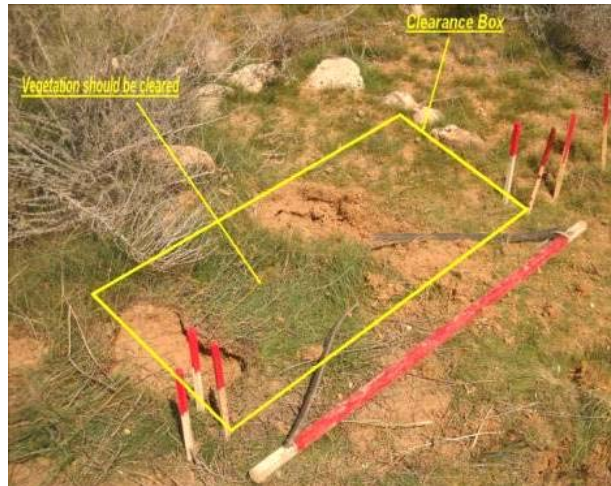
TYPE OF MINE: M14 Anti-Personal

### **IMSMA DETAILED REPORT FOR MINE INCIDENT Monday , 21 March 2011**

#### **Part 1 – Description of the incident**

1. Organisation name: [Demining group]. Team No: Delta
2. Incident date: 21 March 2011. Time: 10:29
3. Location of incident: Sabha 11/(384), Kum Al Ruff Village, Mafraq Province, Sector East
4. Name of site manager or team leader: [Name removed]
5. Type of incident: Uncontrolled detonation of a mine/UXO
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):

The deminer was working in IOE containing M14 AP mines in Section 3 in Sabha 11, he used the MD to indicate the location of the mine then used the light rake then excavated using the heavy rake, during the excavation for the mine using the heavy rake, the deminer hit accidentally the AP mine on the top which detonated the mine.



The accident site

**Part 2 – Injuries**

- 10. Did the incident result in any injuries? Yes
- 11. List people injured and nature of injury: [the Victim], Deminer, Multiple scratches on the left hand fingers and Left forearm, and 2 cm superficial wound in left arm.

**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: None



The damaged Heavy rake

**Part 4 – Explosive hazard**

- 15. Provide details of mines/UXO/ other devices that were involved in the incident: Device Type: AP (Blast) Mine. Method: Buried. Determined by: Raking
- 16. State specific device (if known): Anti-Personal Mine, M14
- 17. Comments (include measurements of any crater resulting from the explosion): Crater Depth: approx. 15 cm / Width: approx. 15 cm

### **Part 5 - Site conditions**

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

Ground/Terrain: Flat, hard, dry

Weather: Clear, mild

Vegetation: Medium grass

### **Part 6 – Team and task details**

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

22. Detector type: MineLab F3. Serial Number: N 17871 ( 83 ). Detector status: Functional. Passed to [Name removed] for technical inspection at Sabha 11 Site on 21 of March 2011. Tripwire feeler used? No

23. Hand tool: Heavy rake

24. PPE: Vest, Mask Visor [Blast boots]

25. Comments: None

### **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: ( 2 ) minutes

b. Time spent at site administering treatment: ( 6 ) minutes

c. Time from evacuation to arrival Rosary Hospital: ( 60 ) minutes

### **Part 8 – Reporting procedures**

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

Investigation conducted by: [Name removed], [Name removed]

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

Verified by: [Name removed], [Name removed]

Printed Name: [Name removed]

**Attachments:** [Held on file]

Statements by Injured Members

Statements by Witnesses

Photographs of Injuries  
Injury data sheet(s)  
Photographs of Incident Site  
Copy of Incident Report  
Copy of Medical Report  
Copy of Injury Card

**Findings**

The deminer didn't use the proper procedure to pinpoint MD signal.  
The deminer didn't approach to the mine as per as SOP.  
The deminer didn't use the light rake to make clear vision in the clearance box .  
The team leader should notice that the deminer wasn't working as per as SOP.  
Signed: Ops Coordinator

**Victim Report**

<b>Victim number:</b> 912	<b>Name:</b> [Name removed]
<b>Age:</b> 43	<b>Gender:</b> Male
<b>Status:</b> deminer	<b>Fit for work:</b> yes
<b>Compensation:</b> Not made available	<b>Time to hospital:</b> 68 minutes
<b>Protection issued:</b> Frontal apron Mask Visor blast boots	<b>Protection used:</b> Frontal apron; Mask visor; blast boots

**Summary of injuries:**

INJURIES: minor Arm; minor Hand

COMMENT: A Medical report in Arabic is held on file. "Multiple scratches on the left hand fingers and Left forearm, and 2 cm superficial wound in left arm" reported in the field.

## Statements

### **Deminer: [The Victim]**

I remember on the 21st of March 2011 we started working on the 1st and 2nd parts of work normally, then on the 3rd part I was working on external IOE (Irregular Outer Edge) area and I cleared the centre lane, I found out that the mines are too close to the centre lane so I recovered M14 mine the second mine on the cluster and went back to recover the 1st mine after the start point of IOE so I made the visual check then located the signal using the metal detector and started using the light rake to get closer to the mine then I switched to use the heavy rake but the ground was hard so accidentally I hit the AP mine on the top which caused the incident.

The team leader was near my site so he came with deminer [Name removed], they checked me. I had some injuries on my left arm and hand, they accompanied me to the ambulance then they evacuated me to the hospital.

A: Yes, we were given the morning safety brief from the team leader before starting the work.

A: No the exploded mine was underground not visible to me.

A: The average of mine depth there is around 5-10 cm.

A: Yes it is a hard area to work on and has several sizes of stones.

A: Yes I used the marker to locate the mine.

A: Yes I made a mistake while approaching to the mine.

A: Yes I wore all the safety tasks.

A: No I had no problems or stress that day.

### **Team leader: [Name removed]**

We went to the field at 07:00 am and I gave the team the morning safety brief as usual and distributed the work on deminers, first two parts of work were ended normally but on the 3rd part deminer [The Victim] was working on the centre lane of SML area at the end of the 3rd direction, he called me and I went to see what is his case, he cleared M14 mine the second mine on that area and very near to the centre lane so I told him that he has to clear the first mine according to the SOPs then I headed to another deminer, I was 15 meters far from the injured when I heard a sound of explosion, I informed about the accident and went to the injured with deminer [Name removed] the nearest deminer to the accident site, he was standing on the centre lane with some blood on his left arm, we evacuated him walking to the ambulance on the entrance of the lane then they evacuated him to the hospital.

A: Yes he was wearing all his safety tasks.

A: While I was at his site he used the marking triangle but when the accident happened I have no idea.

A: No he doesn't have mistakes usually.

A: No I didn't notice anything weird on him that day.

### **Witness Deminer: [Name removed]**

I remember that we entered the field on the 3rd part of work and started working as usual, I was working on SML area near the fence and I was 50 meters far from the injured deminer, at

10:30 am I heard a sound of explosion turned to be at deminer [the Victim]'s site, I headed to the accident place to find the team leader there , the injured was standing on the centre lane with some blood on his left arm we evacuated him walking to the ambulance, then he was evacuated to the hospital.

A: Yes the team leader gave us the morning safety brief.

A: The mine depth average on that area is around 10-15 cm.

A: No I didn't see him while working because I was working on the south direction and he was on the north.

A: Yes I use the marker on the centre of the signal continuously and I think everybody does the same.

A: No I didn't notice any unusual actions from the injured on the day of the accident.

## **Analysis**

The primary cause of this accident is listed as a "Field control inadequacy" because the Ops Officer's finding showed that the Victim was working in breach of his SOPs and his errors were not corrected. The secondary cause is listed as "Unavoidable" because there is no evidence in the report in support of the Ops Officer's findings, so it is possible that the Victim was working properly at the time of the accident. The failure to record any reason(s) for making conclusions that go against the evidence collected is why this accident is recorded as having had an *Inadequate Investigation* under Notes.

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 other records where rakes were used, provide compelling evidence that the controlled use of rakes for area excavation and signal investigation can be both effective and safe.