DDAS Accident Report

Accident details

Report date:	06/03/2011	**Accident number:**	675
Accident time:	10:15	**Accident Date:**	20/07/2009
Where it occurred:	MF: E41, AL SHAJARAH 3, ALRAMTHA Province	**Country:**	Jordan
Primary cause:	Unavoidable (?)	**Secondary cause:**	Field control inadequacy (?)
Class:	Excavation accident	**Date of main report:**	Not recorded
ID original source:	None	**Name of source:**	Demining group
Organisation:	**[Name removed]**		
Mine/device:	M14 AP blast	**Ground condition:**	grass/grazing area hard
Date record created:		**Date last modified:**	06/03/2011
No of victims:	1	**No of documents:**	2

Map details

Longitude:		**Latitude:**	
Alt. coord. system:		**Coordinates fixed by:**	
Map east:	35.94638 E	**Map north:**	32.685068 N
Map scale:		**Map series:**	
Map edition:		**Map sheet:**	
Map name:			

Accident Notes

no independent investigation available (?)

standing to excavate (?)

use of rake (?)

long handtool may have reduced injury (?)

non injurious accident (?)

Inadequate detector pinpointing

Accident report

A PDF report of this accident was made available by the demining group involved in late 2010. Its conversion into a DDAS file has led to some of the original formatting being lost. Text in square brackets [ ] is editorial.

The internal investigation report is reproduced below, edited for anonymity.

[Demining group] – MINE ACTION TEAM - JORDAN

TASK NAME AL SHAJARAH 3 (412), NORTH BORDER PROJECT, EAST SECTOR

GRID REF: 32.685068 N, 35.94638 E, AL SHAJARAH 3

MINEFIELD NO.- 412, MINEFIELD TASK ID- E 412 AL SHAJARAH 3. SECTOR: - EAST

INVESTIGATION CONDUCTED BY [Name removed].

DEMINER: [the Victim]. DATE OF BIRTH: 10/04/1960: NIC NO: [Removed]

SECTION COMMANDER: [Name removed]. TEAM LEADER: [Name removed].

TIME OF INCIDENT: 10:15 AM: DATE OF INCIDENT: 20 JULY 2009

NATURE OF INJURY: No Injury. TYPE OF MINE: Anti Personnel M 14

IMSMA DETAILED REPORT FOR MINE INCIDENT Monday, 20 July 2009

[The following is extracted from IMSMA-style tick-box forms.]

Part 1 – Description of the incident

1) Organisation name: [Demining group], JORDAN Team No: Metal Detector 1.

2) Incident date: 20/07/2009; Time: 10: 15 AM

3) Location of incident: EAST SECTOR; Province: ALRAMTHA; Village: AL SHAJARAH; Project or task No: E 412 ALSHAJARAH 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

7) Device detonated while raking with Heavy Rake: investigating.

8) Device was found in an area classified as a hazardous area.

9) Narrative: While the deminer was trying to investigate a signal using the heavy RAKE and after he pinpointed it , and finished with the light RAKE the deminer hit the non visible AP mine (M14) by the heavy RAKE on the pressure plate which initiated the mine 2.2 metres away from the deminer.

[Picture of the accident site.]

Part 2: Injuries

10) No injuries.

11) No names of Victims to list. Deminer at the time was [Name removed].

Part 3: Equipment damage

12) No damage to equipment.

13) No damaged equipment to list.

14) No damage to publicly owned property.

Part 4: Explosive hazard

15) AP blast mine, buried, and “determined by” raking.

16) Mine type: M14

17) Crater depth approx 15cm, Width approx 40cm.

Part 5: Site conditions

18) The ground was soft and flat.

The weather was clear and hot

The vegetation was “heavy” grass.

Part 6: Team and Task details

21) Victim was part of a team that had been working at the task for one month and working on the day for 3 hrs and 15 minutes.

22) Tripwire feeler was not used.

23) Hand tool used: Heavy rake.

24) PPE used was a “vest” and “visor”.

Part 7: Medical and First aid

Medical treatment was not required

26) There was a medic, stretcher. Ambulance, safety vehicle and radio at the accident site.

27) A mine incident drill was carried out.

28) Time from the accident to the Section Medical Point was one minute. 29 minutes were spend ascertaining the extent of injury. The victim was then evacuated to hospital for confirmation. The evacuation by ambulance took 22 minutes.

Attachments: statements, photographs, medical report. [No medical report made available.]

[A photograph showed the deminer who detonated the mine apparently uninjured.]

Observations and Recommendations

The incident happened due to an individual mistake that the deminer didn't approach the mine in the proper way, more than that the mine found on a depth of 35 cm .

Signed: Operations Coordinator, [Name removed], 20 July 2009

Victim Report

Victim number: 858

Name: [Name removed]

Age: 49

Gender: Male

Status: deminer

Fit for work: yes

Compensation:

Time to hospital: 52 minutes

Protection issued: Frontal apron
Mask Visor
blast boots

Protection used: Frontal apron, Mask visor, blast boots

Summary of injuries: No injuries recorded.

COMMENT: No medical report was made available.

Statements

Statement 1

Name: [Name of Deminer involved]. Position: Deminer (Cause of Blast).

As I was working on SML B after working on the centre lane I started entering to a new cluster which includes 4 AP mines, I put the pinpoint to start working and didn't find any signal in that box although I doubted the existence of the centre mine in its expected place inside the box where there were no signal, then I got back and worked on the same box and decided to go deeper in the ground using the heavy rake to remove the sand. Then the mine blasted at 10: 15 am. I got out of the field walking then I was evacuated to the hospital.

Answers to Investigator Questions:

Yes, the digging depth was 30 cm when the blast happened.

Yes, I know that the metal detector gives a signal to 22 cm depth.

Yes, it happened with me before that the detector didn't give a signal but when I dig I found the mine at 10 cm depth.

Yes, sometimes I feel that the detector I work on # 44 gives wrong information.

Statement 2

Name: [Name removed]. Position: Section Commander.

The team leader gave all the team the morning safety brief, then I gave it to my group and some work instructions then I distributed them to their sites. The de-miner [involved in the accident] was on the SML B, I identified the cluster place to him and he entered to work on it, then I went to the other de-miners. I went back to him and found him working on 20 cm depth and using the detector but found no signal. He started digging deeper and I left him, and while I'm leaving a blast happened at his site. I informed the medic team about the accident and the team leader. He was fine got out of his site walking.

Statement 3

Name: [Name removed]. Position: Team leader.

I was supervising the group in task 413 and the section commander [name removed] was with the group in 412. At 10:15 am I heard a sound of explosion from [Name removed]'s area of responsibility, I went there and informed the people involved. We evacuated the injured and the medic team made him a first aid he was fine and didn't suffer from anything. The accident was in lane 6 SML B. The reason of the accident was because of hitting the ground with the heavy rake and the mine was at 35 cm depth which caused the blast although he was working according to the procedures.

Analysis

The primary cause of this accident is listed as *"Unavoidable"* because it seems that the deminer was working to SOPs and that the procedures he was using prevented him suffering injury. The use of the long rake may have made a detonation more likely to happen, but the distance that it imposed between the deminer and the seat of the initiation was enough to prevent any injury (with this small mine).

The secondary cause is listed as a *Field Control Inadequacy* because, despite the statements and the narrative, in the photograph of the blast crater there is no evidence of any excavation having been conducted to 20cm around that area before the blast occurred. The mine was almost certainly initiated by "hacking" at the ground with the heavy rake, which is not approved in the demining group's SOPs.

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 safe.