

DDAS Accident Report

Accident details

Report date: 06/03/2011	Accident number: 659
Accident time: 09:59	Accident Date: 15 th August 2010
Where it occurred: MF 367, Swailmeh Village, Mafraq Region	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	Ground condition: Rocky, grassland, slope
Date record created:	Date last modified: 06/03/2011
No of victims: 1	No of documents: 3

Map details

Longitude:	Latitude:
Alt. coord. system:	Coordinates fixed by:
Map east: 36.16783 E	Map north: 32.51648 N
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

No independent investigation available (?)
Use of rakes (?)
Long handtool may have reduced injury (?)
Standing to excavate (?)
Detector pinpointing problem (?)

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: 32.51648 N: 36.16783 E

MINEFIELD NO – 367, minefield TASK ID - swailmeh 2

Investigation conducted by – [Demining group], [Name removed]

Deminer: [The Victim], NIC NO: [Removed]

TEAM LEADER: [Name removed], Team: lima

TIME OF INCIDENT: 09:59 hrs, DATE OF INCIDENT: 15 Aug 2010

NATURE OF INJURY: lesions in both hands

TYPE OF MINE: M14 AP Mine

IMSMA DETAILED REPORT FOR MINE INCIDENT Sunday, 15 Aug 2010

Part 1 – Description of the incident

1. Organisation name: [Demining group], JORDAN. Team No: LIMA
2. Incident date: 15 Aug 2010, Time: 09:59
3. Location of incident: NW SECTOR, Province: Mafraq, Village: Swailmeh, Project or task No: Swailmeh 2 (367)
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):

The Deminer working in SML 11 on Missing AP M14 and he wasn't following the proper procedures and accidentally he hit the M14 mine by the heavy rake from the top which 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	Lesions in Both Hands

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)



[The head of the damaged rake.]

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): Anti-Personal Mine, M14

17. Comments (include measurements of any crater resulting from the explosion): Crater Depth: approx. NA cm / Width: approx. NA cm. The crater has been filled with soil due the blast spot near an uneven ground.

Part 5 - Site conditions

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

Ground/Terrain: Soft, Uneven

Weather: Clear, Hot

Vegetation: Medium, Grass



[The accident site.]

Part 6 – Team and task details

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

[The Victim], Deminer

21. How long had this team been?

a. At this site? 40 Days

b. working on this task? 40 Days

c. working on the day? 3 Hours & 29 minutes

22. Detector type: F3. Serial Number: N 16238(55) Detector status: Functional. Passed to [Name removed] for technical inspection at Swailmeh 2 on 15 of Aug 2010 (date): Tripwire feeler used? No.

23. Hand tool: HEAVY RAKE

24. PPE: Vest, [Mask] Visor, [Blast boots]. [A photograph of the Mask Visor with clouded lens and bloody fingerprints was included in the file.]

25. Comments: The deminer wasn't following the proper procedures in clearing the cluster and his approach to the signal was not as per the SOP

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: (2) minutes

c. Time from evacuation FROM to arrival King Abdullah Hospital: 22 minutes

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]

Finding

The measuring stick pointed according to SOP.

The deminer was wearing all his safety tasks including the [Mask] Visor.

The deminer worked on three missing mines according to SOP.

The deminer wasn't approaching the right way.

The deminer didn't use the clearing box and the layers method as the area was a hill side.

The deminer didn't hear any signal so he didn't specify the target.

The deminer was hitting using the heavy rake what caused the accident.

There were some stones on the clearing area.

Signed: Investigation Officer

Operation Manager Recommendation

The incident happened while the deminer trying to investigate a signal using the heavy RAKE. The deminer was close to the mine and the distance was less than the RAKE handle 2.2 m that the area very sloppy (water course) and the deminer was looking for the missing mines.

The incident happened due to an individual mistake that the difficulty of the area need from the deminer to be more patient while investigating the metal detector signal.

Signed: Ops manager

Attachments:

Statements by Injured Members

Statements by Witnesses

Photographs of Injuries

Photographs of Incident Site

Copy of Incident Report

Victim Report

Victim number:	Name: [Name removed]
Age:	Gender: Male
Status: Deminer	Fit for work: Yes
Compensation: Not made available	Time to hospital: 26 minutes
Protection issued: Vest, Mask visor, blast boots	Protection used: Frontal apron, Mask visor, blast boots

Summary of injuries:

INJURIES: Minor hands, Minor arm

COMMENT: See Medical report.

Medical report

No formal Medical report was made available.

A photograph showed the Victim with finger, hand and forearm bandaged.



Statements

Statement 1: the Victim

I was working on missing mines on SML11 , I did on three missing mines step by step and when the accident happened I didn't hear any signal as the mines were deep , when I pulled the stones that were in the working area the heavy rake hit the mine and exploded , then they evacuated me to the hospital.

QA:

Q: Did the team leader give you the morning safety brief?

A: Yes he did.

Q: Did the team leader explain to you how to deal with missing mines?

A: Yes he did.

Q: Were you wearing all your safety tasks especially the mask?

A: Yes I was or else my face would have been affected with the shrapnel.

Q: Do you suffer from any injuries?

A: Yes, there are scratches on my right and left hands.

Q: When you were working on this SML; were you using the tray method?

A: Yes.

Q: Was the pointing stick on its place when you were working?

A: Yes.

Q: Within the accident site; did you make the clearing box method?

A: No as the area is a hill side and I was progressing step by step in the sand.

Statement 2: Team leader

Around 10:00 am I heard a sound of explosion from deminer [the Victim] side who was working on SML11 from the main field (366). I was 40 meters far and near him was deminer [Name removed] who was working on SML 12 which is 15 steps away from the injured site. And also deminers: [Name removed] and [Name removed] were working as medical coverage near them. I informed the ambulance and sector coordinator who was near me and

we evacuated the injured to the safe lane until the ambulance came. Then he was evacuated to the hospital, he had some external scratches on his hands.

QA:

Q: Did you give the team the morning safety brief ?

A: Yes I did and informed them about the nature of the working area.

Q: Did you notice anything wrong with the injured?

A: No I didn't.

Q: Did you explain to the injured about working with missing mines?

A: Yes, I did and that he should use the tray method.

Q: Did you assure deminers about the danger of SML areas as it's in a valley and has many piles of stones and mines are deep?

A: Yes, I clarified it by myself and we cleared two mines on 45 cm depth and another on 21 cm .

Statement 3: Witness deminer

I was working on SML12 which is near to SML11 when I heard a sound of explosion from my back the site of deminer [the Victim], team leader and deminers [Name removed] & [Name removed] was near us so we went immediately to the injured and evacuated him outside the field till the medic team came and made the 1st aid then evacuated him to the hospital.

Q, A:

Q: did the team leader give you all the morning safety brief?

A: Yes, he did.

Q: why did you enter the field after the injured was evacuated outside it?

A: Deminers [Name removed] and [Name removed] asked me to bring the detector as its still working.

Q: Do you know that it's not allowed for anyone to enter the accident site before investigation?

A: Yes I do know that and that we shouldn't touch anything on the accident site.

Q: Did you adjust anything on the accident site?

A: No I didn't I just took the detector.

Q: What was your motive to go there?

A: No motives at all only my colleagues told me that we have to bring the detector.

Statement 4: Witness Deminer

I and the deminer [Name removed] were near the deminers [Name removed] and [the Victim] working as medical coverage and around 10:00 am we heard a sound of explosion, we headed to the injured site and evacuated him out side the field till the ambulance came, and they evacuated him to the hospital.

QA

Q: Did the team leader give you the morning safety brief?

A: Yes he did, and gave us some information about the nature of our work before we entered the field

Q: Did you tell deminer [Name removed] to bring the detector of the injured from his site?

A: No I didn't, he did it by himself

Q: Did you hear the team leader or any other deminer telling him to bring the detector out of the field ?

A: no I didn't hear anybody .

Q: Did you see [Name removed] getting out of the accident site with the detector?

A: yes.

Q: Did you hear me the sector coordinator and the team leader when we were shouting on [Name removed] "what are you doing"?

A: Yes I did.

Statement 5: Witness Deminer

I was with deminer [Name removed] working as a medical coverage near the deminers [the Victim] and [Name removed] and we heard a sound of explosion from the deminer [Victim] site, immediately after the team leader informed about the accident we headed to the injured site and evacuated him outside the field.

QA:

Q: Did the team leader give you the morning safety brief?

A: Yes he did, and gave us some information about the nature of our work before we entered the field.

Q: Did you see deminer [Name removed] inside the accident site?

A: Yes, I did.

Q: Did you tell [Name removed] to go and bring the injured detector?

A: No I didn't, because it's not allowed to enter the accident site before investigation.

Q: Did you hear the team leader telling him to bring the detector?

A: No.

Q: Did you hear me and the team leader shouting on [Name removed] to get out of the field?

A: Yes.

Analysis

The primary cause of this accident is listed as a *Field Control Inadequacy* because the investigators identified that the Victim was not working to the SOPs but his error was not corrected. The secondary cause is listed as *Unavoidable* because it is possible that the deminer was working as directed at the time of the accident.

The investigation included the observation that the Victim failed to find the mine with his metal detector, and then the metal detector was removed from the site before the investigation could take place. This may imply a detector training inadequacy or possibly the cover-up of a battery maintenance inadequacy (the Minelab F3 in use requires more power than other models and the demining group have a complex battery charging regime in place).

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).