

# DDAS Accident Report

## Accident details

<b>Report date:</b> 15/01/2008	<b>Accident number:</b> 475
<b>Accident time:</b> 06:55	<b>Accident Date:</b> 26/08/2006
<b>Where it occurred:</b> MF No. 004, North South Sector, Beyr Mathkour, Wadi Araba	<b>Country:</b> Jordan
<b>Primary cause:</b> Field control inadequacy (?)	<b>Secondary cause:</b> Inadequate training (?)
<b>Class:</b> Excavation accident	<b>Date of main report:</b> 28/08/2006
<b>ID original source:</b> NS-10-05/26/08/06	<b>Name of source:</b> JES
<b>Organisation:</b> [Name removed]	
<b>Mine/device:</b> No 10 AP blast	<b>Ground condition:</b> dry/dusty hard sandy
<b>Date record created:</b> 15/01/2008	<b>Date last modified:</b> 15/01/2008
<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> E 035.19753	<b>Map north:</b> N 30.50406
<b>Map scale:</b>	<b>Map series:</b>
<b>Map edition:</b>	<b>Map sheet:</b>
<b>Map name:</b>	

## Accident Notes

inadequate training (?)  
long handtool may have reduced injury (?)  
no independent investigation available (?)  
metal-detector not used (?)  
no independent investigation available (?)  
standing to excavate (?)  
use of rake (?)

## Accident report

The reports of this accident were made available in November 2007 as a PDF file. Their conversion to a text file for editing means that some of the formatting has been lost. The substance of the reports is reproduced below, edited for anonymity. The original PDF file is held on record.

### Preliminary Demining Incident Report

From: [Demining group] 26/8/2006 05:45 PM

To: National Committee for Demining & Rehabilitation, Amman, Jordan

Subject: Demining Incident Initial Report

[Demining group], Aqaba Office, Manual Team 1

Wadi Araba, Beyr Mathkour, NS 5 (IDF 4)

Date and time of incident: 26/8/2006 06:55 AM

Description of injuries: Three superficial wounds left lower arm, left femur, left side of his overhead and left side of his chin.

Treatment given: Disinfection with iodine solution and sterile wound dressing, as well as anti tetanus vaccine and Paracetamol 1gm.

Current condition of casualty: Stable. The patient was discharged at 11:35hrs, and transported by [Demining group] vehicle to his home in the town of Ghour Safi.

Evacuation methods, routes, destinations and estimated arrival times.

Time of accident: 06:55hrs

Time of arrival at the section medical point: 06:57hrs 2min

Time of departure to Primary Health Clinic, Risha 07:10hrs 15min

Time of arrival at Primary Health Clinic, Risha: 07:42hrs 47min

Time of discharge at Primary Health Clinic, Risha: 11:35hrs 280min

List equipment/facilities/infrastructure damaged: Heavy Rake slightly bended

Describe how the incident occurred: Deminer hit the mine on the top by using heavy rake, resulting in mine blast.

Contact details of key personnel: [Name removed], Operations Officer, 0776717502

Any other information: According to the preliminary investigation the incident is caused due to a human error. The deminer has conducted a violation of drills in place.

Did the incident occur in a cleared, safe or contaminated area? Accident occurred in the contaminated area

Device type (if known): Antipersonnel Mine: Israeli No 10

Any other relevant information.

Detailed Accident Report to be submitted within 7 days

This report was done by the [Demining group] internal Investigation Board comprising of Operations Manager, Technical Assistant, System Consultant, Medical Coordinator and Senior Operations Assistant.

## **INDEPENDENT INVESTIGATION REPORT**

OF MINE INCIDENT AT BEYR MATHKOUR

INVESTIGATION DATE: 26.08.2006

[This was not an “independent” investigation because all investigators were employed by the demining group that had the accident.]

### **INTRODUCTION:**

A [Demining group] Manual mine clearing team is presently working in the Israeli minefields at sector North sector in Beyr Mathkour. On 26 July 2006, 32 local deminers were engaged in clearance operations.

At 06:55 Hrs one of the deminers of No-3 section [the Victim] while working in lane No-7 hit a mine on the top and resulted in a mine blast and he sustained SUPERFICIAL WOUNDS IN LEFT LOWER ARM, LEFT FEMUR, LEFT SIDE OF OVERHEAD AND LEFT CHIN .

The [Demining group] Operational Manager was asked formerly by the Base Manager to conduct the investigation. This investigation was conducted the same day after the accident.

### **LOCATION OF ACCIDENT:**

Wadi Araba province, North sector, near village Beyr Mathkour.

Grid References: N 30.50406 E 035.19753

### **PERSONS/PERSONNEL PRESENT ON OPERATIONAL SITE AT TIME OF ACCIDENT:**

- [Name removed], Team Leader of No-1 manual team
- [Name removed], Team Leader of No-2 manual team
- [Name removed], Sector Administrator.

### **PERSONNEL INVOLVED IN THE INVESTIGATION:**

- [Name removed] [Demining group] Operations Manager
- [Name removed], Sector Administrator
- [Name removed], national Medical Co-ordinator
- [Name removed], Ambulance driver and Translator

### **GENERAL OVERVIEW:**

A mine blast incident occurred at approximately 06:55hrs on Saturday 26/08/2006 in the lane No-7. Deminer [the Victim] detonated a No-10 Israeli anti personnel blast mine. At the time of

the incident the deminer was wearing the PPE (Body vest and Goggles). The deminer while dressing the edges hit the mine on the top by heavy rake resulted in a mine blast. The deminer sustained SUPERFICIAL WOUNDS IN LEFT LOWER ARM, LEFT FEMUR, LEFT SIDE OF OVERHEAD [Forehead] AND LEFT CHIN.

Immediately after the mine blast the section commander rushed to the lane and helped the injured deminer to come out of minefield. The deminer was then given initial first aid treatment by the section medic. After the first aid the casualty was sent to primary health centre at Risha. After the advance treatment by doctor of Risha hospital he was sent home for rest.

#### **OBSERVATIONS:**

This accident should not have happened, there were some main factors that should have been more than enough for an accident.

- (a) The deminer is not following the drills as per the SOP.
- (b) The deminer is not using the light rake to maximum to expose mines.
- (c) The deminer is not removing the stones before using the light rake.
- (d) The deminer straight away using the heavy rake.
- (e) The deminers are hacking with the heavy raking, especially at the edges.
- (f) The safety rules were not followed as per SOP.
- (g) The section commander failed to supervise his section deminers.

#### **RECOMMENDATIONS:**

It is recommended that this kind of violation of the safety rules and drills should not be tolerated. Those who are failing to adhere to the rules should be given severe punishments. The section commanders should be warned to pay more attention to enforce the laid down rules as per SOP.

Signed: Operations Manager, [Demining group] Mine Action Team, Jordan

### **IMSMA INCIDENT REPORT**

ISRAELI MF No. 70370004

MINEFIELD TASK ID: NS-10-05: North South Sector, Beyr Mathkour, Wadi Araba

GRID REF: N 30.50406: E 035.19753

26 AUGUST 2006

INVESTIGATION CONDUCTED BY – [Demining group], OPERATIONS MANAGER

SECTION COMMANDER and TEAM LEADER: [Names removed]

TEAM: MANUAL TEAM NO -1

TIME OF ACCIDENT: 06:55 AM

DATE OF ACCIDENT: 26 AUGUST 2006, SATURDAY

TYPE OF MINE : NO-10 ISRAELI ANTI PERS MINE

## Narrative

[Demining group] Manual Team No.1, Section 3, deminer hit a No-10 Anti Pers Mine on the top and resulted in a mine blast. The Victim was wearing his Vest and Goggles. Buried device detonated while raking with Heavy rake.

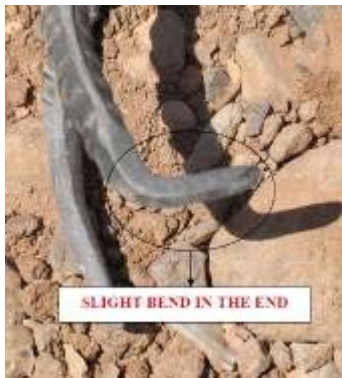
[The Victim] – deminer – [sustained] superficial wounds in left lower arm, left femur, left side of head and left chin – Raking.

The crater depth was approx. 18cm and its width approx 45cm.

[The position of the accident is circled below.]



[One rake tine was bent, but not broken or burned.]



## Site conditions

The weather at the time of the accident was clear and hot. The terrain was flat and “medium”. There was no vegetation.

## Team details

The demining team had been working for 56 days. They had been 25 days at the site. On the day of the accident, work had been progressing for 25 minutes.

## Medical & First Aid

[The IMSMA form had the “minutes” tick-box ticked for each entry, but no number of minutes entered.]

[The Victim's PPE was photographed and undamaged. The goggles had blood smeared on the inside.]

### **Reporting procedures**

This investigation was conducted by: [Demining group] Operations Manager. The report was compiled/translated by: [Name removed] Sector Administrator & [Name removed] Medical coordinator.

Printed date: 28/08/2006

## **PRELIMINARY CONCLUSIONS AND RECOMMENDATIONS**

Date: 26/08/2006, Saturday

Location: Beyr Mathkour

Team No: No-1 Manual Team and Section 3

### 1) Background Information:

A mine blast incident occurred at approximately 06:55hrs on Saturday 26/08/2006 in the lane No-7. Deminer [the Victim] detonated a No-10 Israeli anti personnel blast mine. At the time of the incident the deminer was wearing the PPE (Body vest and Goggles). The deminer while dressing the edges hit the mine on the top by heavy rake resulted in a mine blast. The deminer sustained SUPERFICIAL WOUNDS IN LEFT LOWER ARM, LEFT FEMUR, LEFT SIDE OF OVERHEAD [FOREHEAD] AND LEFT CHIN.

### 2) Actions taken following incident:

Immediately following the incident the following action have been taken.

- (a) Immediately work stopped and all deminers assembled at the control point.
- (b) Accident lane Closed and nobody entered the lane.
- (c) Information given to Aqaba Base Manager and Programme Manager for further informing to NCDR.

### 3) Follow up action / Investigation:

- (a) After the incident [Demining group] Operations Manager conducted the incident Investigation.
- (b) Work was suspended for the next 24 hours.
- (c) On 28 Aug 2006 all deminers have been explained the causes of accident and there after refresher training has been conducted for the whole day.

### 4) Recommendations:

The Team leaders and section commanders have to ensure that all deminers should use the light rake as much as possible. The heavy rake should be used only if light rake is ineffective. All the mines should be exposed only by the light rake. Anybody violating the drills as per SOP should be suspended immediately.

## Victim Report

<b>Victim number:</b> 635	<b>Name:</b> [Name removed]
<b>Age:</b> 39	<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> 47 minutes
<b>Protection issued:</b> Frontal apron Goggles	<b>Protection used:</b> Frontal apron, Goggles

### Summary of injuries:

minor Arm

minor Face

minor Head

minor Leg

COMMENT: See Medical report.

### Medical report

[A formal Medical report was supplied, but not translated. It is held on file.]

The investigation report states that the Victim sustained:

"Three superficial wounds left lower arm, left femur, left side of his forehead and left side of his chin.

Treatment given: Disinfection with iodine solution and sterile wound dressing, as well as anti tetanus vaccine and Paracetamol 1gm.

Current condition of casualty (ies): Stable. The patient was discharged at 11:35hrs, and transported by [Demining group] vehicle to his home in the town of Ghour Safi.

Pictures below show very light injuries.





## **STATEMENTS**

### **Statement No.1: the Victim**

On 26/8/2006 morning at 06:35 I entered the field as usual, holding all required tools and wearing all safety PPE. I start the work at 7:00am using the light rake, then using the heavy rake. I make the first square, then the second then third and at the fourth square after using the light rake I used the heavy rake in a suitable way, and same how we trained, and at the end of square from the right side when I was raking the accident happened. I was fully conscious after the blast. I left the field towards the medic and he was away from me approximately 20 m. He turned up towards me at the half of the way and took me to the tent, he checked me and provide the first aid to me then I transferred to Risha Clinic.

Signed and Dated 26 August 2006

### **Statement No.2: Section Commander**

I am [Name removed] No-3 section commander. The deminer [the Victim] work in my section, morning the deminers allocated each at his line, then the stone indicating the starting line is applied to his line. I left his line to check the other deminers in my section, after I passed next to him, I heard a blast sound. I look behind I found a dust and smoke around the victim. I run to him immediately and evacuate him to treatment area. I use the radio to ask for medical help and they arrived immediately. The victim received the first aid. He was bleeding from his face. He informed us that he is fine and not to worried about him. Also a small wound found in his leg. The victim transferred to Risha Clinic.

Signed and Dated 26 August 2006

### **Statement No.3: deminer**

I am [Name removed]. I am a deminer at section 1. While am working behind the deminer [the Victim], and during the work I heard a blast sound when I raised my head to see, a smoke and dust was around him. I shout loudly 3 times (Accident). I close my line and left the field as the SOP mentioned, after that I can see the section commander running towards him. The victim was walking and his section commander help him, then I follow my section.

Signed and Dated 26 August 2006

### **Statement No.4: deminer**

I was at the field working in the 3rd line of the section 3. I heard a blast sound behind me, when I look to see I start shout (Accident) 3 times. I left the field to help after they close the



work in that field. After the medic provide the first aid, I went with them to the clinic after the medic request that from me because I have the same blood group with the victim. At Risha clinic the victim received the treatment from the doctors.

Signed and Dated 26 August 2006

#### **Statement No.5: Medic**

I am [Name removed], section medic 3. The work started at 6:55am, at 7:07am the accident is happened. I was ready and prepare myself to provide the first aid. The distance between me and the scene was 25 meter. The victim went out walking towards the medical treatment point and I went in the middle of the way to help him, then I take him to the treatment area. At the treatment area I checked the victim and provide him the first aid. When the accident happen deminer [Name removed], he shout three times (Accident), and the section commander was carrying the mines at the mine collection point. The victim was wearing all safety dress at the site of the work.

After checking the victim and provide the first aid we transferred him to Risha Clinic.

Signed and Dated 26 August 2006

#### **Statement No.6: Ambulance driver**

At 07:07am I received by radio a call informing about accident at section 3. Immediately I drive the ambulance with the ambulance medic [Name removed]. We reached the treatment point within 1.5 minutes. The medics provide the victim the first aid and he carried by them using the spinal board to the ambulance. Then he transferred to Risha Clinic. The way took about 35 minutes to reach Risha clinic. When receiving the call I informed the sector administrator [Name removed], and he informed that we moving the patient to Risha clinic. During the transferring process Risha clinic informed through Risha office by Tariq the radio operator. Reached to Risha Clinic and he received the medical treatment.

Signed and Dated 26 August 2006

### **Analysis**

The primary cause of this accident is listed as a "Field control inadequacy" because the investigators determined that the Victim was working in breach of his SOPs and his error was not corrected. The secondary cause is listed as "Inadequate training" because the list of SOP breaches identified by the investigators was lengthy. This implies that the deminers (and/or their supervisors) did not know how they should have been working.

The demining group had put in place the use of a long tool (rake) that should have kept the Victim far enough away from a blast to avoid injury. The raking process that they have pioneered is only safe if systematically conducted in a disciplined manner. As with any tool, rakes can be misused. The most common misuse is "Hacking" at hard ground with the Heavy rakes. The distance still provides some protection but in this case the Victim's head injury implies that he was leaning forward almost over the area he was raking - so placing his forehead within the fragmentation cone commonly associated with an AP mine blast.

It is worth noting that even when conducting rake-clearance in breach of almost all the rules that can limit risk, the stand-off from the blast meant that no severe injury resulted.