

5-1-2003

# DDASaccident397

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*AID*

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# DDAS Accident Report

## Accident details

<b>Report date:</b> 03/03/2004	<b>Accident number:</b> 397
<b>Accident time:</b> 15:20	<b>Accident Date:</b> 01/05/2003
<b>Where it occurred:</b> Demining group's head office, Tyre	<b>Country:</b> Lebanon
<b>Primary cause:</b> Inadequate training (?)	<b>Secondary cause:</b> Management/control inadequacy (?)
<b>Class:</b> Handling accident	<b>Date of main report:</b> 19/05/2003
<b>ID original source:</b> Bol:002/2003: MJF	<b>Name of source:</b> MACC SL
<b>Organisation:</b> Name removed	
<b>Mine/device:</b> Fuze	<b>Ground condition:</b> not applicable
<b>Date record created:</b> 28/02/2004	<b>Date last modified:</b> 28/02/2004
<b>No of victims:</b> 1	<b>No of documents:</b> 3

## Map details

<b>Longitude:</b>	<b>Latitude:</b>
<b>Alt. coord. system:</b> GR 36 70552 68324	<b>Coordinates fixed by:</b>
<b>Map east:</b>	<b>Map north:</b>
<b>Map scale:</b> UNIFIL	<b>Map series:</b> GENIMAP
<b>Map edition:</b>	<b>Map sheet:</b> A (Tibnin)
<b>Map name:</b> 1:50,000	

## Accident Notes

inadequate training (?)  
mechanical follow-up (?)  
dog missed mine (?)

## Accident report

What follows is the original Board of Inquiry report, edited for anonymity and with excess pictures removed.

REPORT FOR MINE ACCIDENT INVESTIGATION BOARD OF INQUIRY – No002/2003  
MINE Accident that occurred in on the 01<sup>st</sup> May 2003.

Map References UNIFIL Genimap 1:50,000 Sheet A (Tibnin).

## Introduction

1. In accordance with National Technical Standards and Guidelines (TSGs), the MACC SL Programme Manger issued a verbal Convening Order Instruction on Thursday 01<sup>st</sup> May 2003, for a Mine Accident Investigation.
2. This is a comprehensive report by the MACC SL QA Officer into the Mine Accident that occurred on the 01<sup>st</sup> May 2003. Based on the investigation, [Demining group]'s Accident Report (Annex A details), [Demining group]'s Investigation Report (Annex B) visits to the accident site, visits to the demining worksite and the photos from the accident site and demining worksite, **the accident is considered preventable.**
3. The information provided by [Demining group] to the MACC SL QA Section in the "IMSMA Accident and Casualty Reports", attached at Annex C is confirmed. The accident occurred at approximately 1520hrs on the 01<sup>st</sup> May 2003, at [Demining group]'s Head Office in Tyre Southern Lebanon, GR 36 70552 68324 (seat of detonation); Annex D details a map of the general area.

## Events leading up to the Accident

4. On the morning of 01<sup>st</sup> May 2003 at approximately 0935hrs having completed the Quality Assurance (QA), Mine Detection Dog (MDD) Evaluations, QA MDD Officer [the Victim] departed Minefield (M/F), 288 at Majda Zun and proceeded to M/F 1272 at Tayr Harfa, arriving there at approximately 0945hrs. On arrival at site it was ascertained that the MDD Team (call-sign MDD2), was finishing their work for the day and were measuring up the area for the Daily Work Report statistics.
5. Whilst this was taking place MDD Handler [name excised] noticed a ***"shining metal object"***, next to the M/F perimeter fence, that he recognised to be the igniter from an Israeli No4 AP Mine. The MDD was withdrawn and on closer inspection it was ascertained that ***"the collar and safety pin were missing and the firing pin was in"***. The igniter was then picked up, carried across the searched area and then placed on the bund adjacent to the Command Post (CP). Site Supervisor [name excised] was then informed via the site radios, whereupon MDD Handler [name excised] continued with his work.
6. Following the passage of information from MDD Handler to Site Supervisor [name excised] of the found igniter, both Site Supervisor [name excised] and QA MDD Officer [the Victim] then went to the area to inspect the igniter. Site Supervisor [name excised] noticed that ***"the retaining plate was missing"***, whereupon he proceeded to pick the igniter up and ***"unscrewed the detonator from the mechanism using Leatherman tools to inspect the inside"***. On inspection of the inside it was noticed that the ***"percussion cap was hit by the striker and had left a distinct dent on the cap"***. Unfortunately Site Supervisor [name excised] ***"overlooked the fact that the detonator wasn't damaged in any other way to indicate that it was free from explosives"***. Site Supervisor then proceeded to screw back on the detonator to the igniter body, using only his fingers.
7. QA MDD Officer [the Victim] then asked if he could retain the igniter, whereupon Site Supervisor [name excised] ***"handed it over to him thinking that it was safe to do so"***. QA MDD Officer [the Victim] then proceeded to take the igniter and at approximately 1155hrs departed the site to move back to [Demining group] Office in Tyre.
8. At approximately 1500hrs QA MDD Officer [the Victim] entered the [Demining group] Office, after completing some administrative duties he then approached QA Officer [name excised] with the igniter (minus the detonator). On inspection of the igniter QA Officer [name excised] ***"noticed that the striker and spring easily slipped out of the igniter body"***, also commenting that ***"the igniter was in a very good condition"***; the igniter was then handed back to QA Officer [the Victim].
9. At approximately 1520 hrs QA MDD Officer [the Victim] was leaving the [Demining group] Office proceeding along the corridor; he reached into his pocket for his cigarettes as he intended to have a smoke. When he placed his hand in his pocket he ***"felt the other"***

**component i.e. the detonator”,** he then proceeded to take out the detonator and because he had been told that it was safe **“proceeded to fit it back together, then there was a loud explosion noise”.**

**Note:** The [quotations] detailed have been extracted directly from the signed witness statements; full details are contained at Annex’s A and B to this report.

### **Accident Details**

10. Following the accident, QA MDD Officer [the Victim] managed to move back towards the office main door whereupon he was assisted initially by QA MDD Officer [name excised] and then by all other [Demining group] personnel present. After the initial on-site stabilisation, QA MDD Officer [the Victim] was then taken to the Najem Hospital in Tyre.

11. On arrival at Najem Hospital in Tyre, QA MDD Officer [name excised] was transferred to the casualty department where he received emergency first aid, underwent x-ray’s of the injured hand and was admitted into theatre at 1600hrs.

### **BOI Post Accident Activities and General Observations 01.05.03**

12. On arrival at the accident scene and after an initial briefing by Programme Manager, it was ascertained that the accident scene had been made secure by [the Demining group]. During the inspection of the accident scene the following observations were established:

- There had been an uncontrolled detonation of an Israeli No9 Igniter in the corridor leading to [the Demining group’s] Office in Tyre.
- Remnants of the No9 Igniter body were located in the corridor. No “U” shaped striker retaining plate, safety pin or safety collar were however located.
- The accident occurred midway along the corridor.
- QA Officer [the Victim] had received initial medical treatment just inside the door of the [[Demining group] Office in Tyre.
- No other items of ordnance or explosive devices were involved.

13. As an aid to the investigation, all items and areas pertaining to the investigation were numbered, photographed in-situ and all details taken. The breakdown of items and areas are detailed as follows:

- No1 - No9 Igniter main body.
- No2 - Approximate location of the accident.
- No3 - Area where QA MDD Officer [the Victim] received initial medical treatment.
- No4 - Location of QA [name excised]’s work-station (nearest person to the accident).
- N05 - Items of the No9 Igniter fragmented detonator body collected by the BOI in the corridor.
- No6 - Items of the No9 Igniter fragmented detonator body and main body collected by the BOI in the corridor.

### **VIEW OF ITEM NO6 (ITEMS OF THE NO9 IGNITER FRAGMENTED DETONATOR BODY AND MAIN BODY)**



[The main body was not destroyed in the detonation.]

**[Other demining group]’s Clearance Operation and Clearance Statistics for M/F 1272**

14. Clearance commenced on M/F 1272 on the 09<sup>th</sup> December 2002, with [the demining group being subjected to QA] clearance being conducted as per the initial MACC SL Clearance Plan. Once the known contaminated area had been cleared and all the mines located as per the Israeli Force record, there was an issue on the 18<sup>th</sup> March 2003 of a MACC SL Site Specific Clearance Plan, for the remainder of the area that had been inadvertently covered by stone spoil by civilian contractors.

15. Briefly, the Site Specific Clearance Plan detailed that the stone spoil area be mechanically collected, graded (20cm thickness), flailed (at least three times) and finally cleared using MDD assets. It was during this final phase of the operation that the No9 Igniter was located by MDD Handler. Annex E details M/F 1272 Site Specific Clearance Plan.

16. Up to the date of the accident the following statistics for M/F 1272 have been confirmed:

- Manual Clearance x 730m<sup>2</sup>.
- Mechanical Preparation x 7946m<sup>2</sup>.
- MDD Clearance x 790m<sup>2</sup>.
- Israeli No4 AP Mines destroyed x 17.
- 120mm Mortar HE destroyed x 3.

#### **Work History of QA MDD Officer [the Victim]**

17. QA MDD Officer [the Victim] is presently the QA MDD Officer for [Demining group] Southern Lebanon, in a position he has held for the last 12 months. Prior to this particular contract, in the last 6 years, he has worked in Bosnia, Northern Iraq, Mozambique and Indonesia on humanitarian and commercial MDD clearance projects; Annex F details QA MDD Officer[the Victim]'s CV.

#### **Work History of MDD Handler**

18. MDD Handler is presently a MDD Handler for [MDD company], currently contracted to [Demining group being subjected to QA], in a position that he has held for the last 10 months. Prior to this particular contract, in the last 3 he has worked in Somaliland and Eritrea on humanitarian and commercial MDD clearance projects; Annex G details MDD Handler's CV.

#### **Work History of Site Supervisor**

19. Site Supervisor [name excised] is presently a Site Supervisor for [demining group being subjected to QA], a position that he has held for the last 10 months. Prior to this particular contract, in the last 3 years he has worked in Angola and Northern Iraq on commercial demining / EOD clearance projects. Site Supervisor [name excised] qualified as an advanced EOD Operator at the South African Defence Force EOD School in 1983. Following this he spent 2 years in an operational EOD role followed by a further 2 years as an Instructor at the EOD School; Annex H details Site Supervisor's CV.

#### **Management Supervision and Discipline**

20. [The Demining group being subjected to QA]'s clearance operation is supervised by an International Operations Manager and an International Site Supervisor is in over all charge of all site assets. There are no reports of disciplinary action being taken against [their] personnel on M/F 1272 task site.

#### **Quality Assurance**

21. Internal QA is a continuous process with daily QA checks and evaluations being conducted by [Demining group being subjected to QA]'s QA Officer and senior site personnel, there are no reports of any indifferent evaluation results on M/F 1272 task site.

22. External QA is carried out by the MACC SL QA Section [by the Demining group involved in this accident]; for M/F 1272 the last External QA Evaluation was conducted on the 24<sup>th</sup> April 2003 where Mechanical Preparation (ARMTRAC 100) was evaluated; the evaluation result was good. For MDD2 the last External QA Evaluation was conducted on the 28<sup>th</sup> April 2003 on Booby-Trap (BT), No 24, the evaluation results were good.

## **Medical Details**

23. QA MDD Officer [the Victim] suffered extensive primary fragmentation lacerations to his left hand thumb, first, second, and third fingers and primary fragmentation lacerations to his palm. Tendon damage was sustained to his thumb, which was treated and repaired during the surgery conducted on the 01<sup>st</sup> May 2003. He also suffered primary fragmentation lacerations to his face and minor abrasions to his stomach.

24. After undergoing the surgery and an over night stay in Najem Hospital on the 01<sup>st</sup> May 2003, he was released on the morning of the 02<sup>nd</sup> May 2003 on the provision that he undergoes daily checks and dressing changes at the Hospital. Annex I details Najem Hospital Report (it should be noted that the diagram detailed is incorrect, as it shows the right hand as being injured and not the left hand).

## **Account Of Activities**

25. The following is a description of the after the accident. The information from the investigation forms the basis of the description of events:

### **01/05/03**

- 1520hrs - Uncontrolled detonation at [Demining group] Head Office corridor.
- 1521hrs – On-site stabilisation of casualty.
- 1522hrs – Initial accident information passed to MACC SL.
- 1523hrs – MACC SL Operations Officer informed of accident.
- 1525hrs - MACC SL Programme Manager informed of accident.
- 1535hrs – Arrival of casualty at Najem Hospital Tyre.
- 1535hrs – BOI Convened by MACC SL Programme Manager.
- 1545hrs – BOI leaves MACC SL on route to accident site.
- 1550hrs – BOI Arrives at accident site to conduct accident investigation and informs [Demining group] Programme Manager of BOI convening order.
- 1645hrs – BOI Leaves accident site to move to MACC SL.
- 1825hrs – BOI arrives at MACC SL and briefs Programme Manager and Operations Officer.

### **02/05/03**

- 0845hrs – BOI departs MACC SL to move to Najem Hospital to conduct witness interviews.
- 0900 hrs – BOI arrives at Najem Hospital.
- 0920rs – BOI leaves Najem Hospital on route to MACC SL.
- 0935hrs – BOI arrives at MACC SL and briefs MACC SL Programme Manager.
- 1350hrs – BOI leaves MACC SL on route to QA MDD Officer [the Victim]'s accommodation to conduct witness interview.
- 1400hrs – BOI arrives at QA MDD Officer [the Victim]'s accommodation.
- 1500hrs – BOI leaves QA MDD Officer [the Victim]'s accommodation on route to [Demining group being subjected to QA]'s base location to conduct witness interview.
- 1515 – BOI arrives at [Demining group being subjected to QA]'s base location.
- 1645 – BOI leaves [Demining group being subjected to QA]'s base location on route to MACC SL.
- 1700 – BOI Arrives at MACC SL and briefs MACC SL; programme Manager and Operations Officer.

### **03.05.03**

- 0700hrs – BOI leaves MACC SL on route to M/F 1272 to view clearance site, collate task information and conduct witness interview.
- 0740hrs – BOI arrives at M/F 1272.
- 0830hrs – BOI leaves M/F 1272 on route to [Demining group being subjected to QA]'s base location to collate clearance information.
- 0910hrs – BOI arrives at [Demining group being subjected to QA]'s base location.
- 0935hrs – BOI leaves [Demining group being subjected to QA]'s base location on route to MACC SL.

- 0950hrs – BOI arrives at MACC SL and briefs MACC SL Programme Manager.
- 1400hrs – BOI briefs MACC SL Operations Officer.

### Insurance Details

26. QA MDD Officer [the Victim] by the standard [Demining group] International personnel conducting mine/UXO clearance activities in Lebanon. All personal accident and medical expense insurance policies for [the Demining group] Davis and J Murphy syndicates at Lloyds. A copy of the scale of entitlements is held at the MACC SL QA Section.

### Details of the Ordnance Involved

27. The Israeli No9 igniter assembly incorporates a lead-shear arming delay, it is fitted through a hole in the end of the mine and screwed into the wall of the charge compartment and sealed with a rubber O-ring. The arming delay protrudes through the end of the mine opposite the “U” shaped striker retaining plate. The arming delay is attached to a safety pin, which is looped over the fuze body and retained by a plastic cap during transit for additional safety. The striker is retained and secured by a “U” shaped striker retaining plate on which the open end of the box rests.

28. The igniter is designed purely for direct pressure operation. To arm the igniter, the plastic cap on the end of the igniter is removed; the safety pin is then removed. The spring-loaded striker is retained until it the arming delay has sheared through the lead wire, which runs through holes in the end of the fuze. The arming process normally takes several hours. Once armed, the striker is retained only by the “U” shaped striker retaining plate; pressure on the lid (in excess of 8kgs), simply pushes the “U” shaped striker retaining plate out which in turn releases the spring loaded central striker. The striker then impacts with the percussion cap which initiates and flashes through to the primary high explosives in the integral detonator, which then transfers the detonating wave to the main TNT charge causing the mine to disintegrate.

### PHOTOGRAPH DETAILING AN ISRAELI NO9 IGNITER



[The investigators indicated that the “percussion cap” screwed to the left end of this was the “detonator”. It is not. This fuze does not have a detonator attached.]

### Conclusions

29. Based on the Incident Investigation the following is concluded:
- a) MDD Handler [name excised] contravened [demining group being subjected to QA]’s SOPs, [Mine Dog demining group’s] SOPs and National TSGs by knowingly picking up and moving a blind and therefore very hazardous Israeli No9 Igniter from M/F 1272.
  - b) Site Supervisor [name excised] contravened [Demining group being subjected to QA’s] SOPs and National TSGs by knowingly picking up, physically dismantling and handing over to QA MDD Officer [the Victim] a blind and therefore very hazardous Israeli No9 Igniter.

- c) On questioning both MDD Handler and Site Supervisor, it was ascertained that they knew the intimate safety arrangements and method of operation of the Israeli No9 Igniter.
- d) [Demining group being subjected to QA] were very fortunate not to have a Demining Accident at M/F 1272, whilst the Israeli No9 Igniter was being moved and dismantled.
- e) Site Supervisor [name excised] contravened the amended MACC SL Site Specific Clearance Plan for M/F 1272 (dated 18<sup>th</sup> March 2003), in that he failed to conduct the daily surface inspection of the surrounding area, following the flailing of the graded spoil.
- f) QA MDD Officer [the Victim] asked for and subsequently accepted the Israeli No9 Igniter from a demining work site, not knowing the full and therefore detailed safety arrangements and method of operation of the igniter.
- g) MDD Handler and QA MDD Officer [the Victim] have no formal EOD experience or qualifications, whereas Site Supervisor [name excised] was an experienced EOD Instructor / Operator.
- h) The Israeli No9 Igniter detonated whilst QA MDD Officer [the Victim] was screwing in the detonator into the igniter body, whilst walking along the corridor from [the Demining group]'s Office in Tyre.
- i) The Israeli No9 Igniter detonated when the percussion cap on the detonator came in intimate contact (through screwing action), with the igniter striker mechanism. This in turn caused the integral detonator to function in his left hand.
- j) At the time of the accident, the igniter striker mechanism was not being held by any safety arrangements, and was moving freely inside the igniter body.
- k) The follow up on-site stabilisation and treatment of QA MDD Officer [the Victim] by all [Demining group] personnel was conducted in a professional and expedient manner.
- l) The BOI agrees with and accepts [the demining group being subjected to QA]'s Investigation Report.
- m) The BOI agrees with and accepts [The demining group doing the QA]'s Accident Report.
- n) The Mine Accident was a preventable accident, with MDD Handler [name excised], Site Supervisor [name excised] and QA MDD Officer [the Victim] all being accountable and responsible to some degree. Due to his previous EOD knowledge and experience however, the main responsibility must lay with Site Supervisor [name excised].

### **Recommendations**

- 30. Based on the Accident Investigation, the following is recommended:
  - a) Amendments are made to all clearance organisations SOP's detailing that under no circumstances are any items of ordnance (live or inert), to be removed from demining work sites without the prior permission of the MACC SL. All amendments are to be submitted to the MACC SL QA Officer for approval.
  - b) An amendment detailing the above are made to National TSGs and presented to the National Demining Office for approval.
  - c) All operational personnel working in Southern Lebanon receive specific and detailed training (from their respective Training Officers), on the safety arrangements and method of operation of the Israeli No9 Igniter.
  - d) All conclusions detailed in this report be distributed and discussed with all operational staff within [the Demining group subjected to QA and the Demining group conducting the QA].

Signed: QA Officer, Mine Action Coordination Centre Southern Lebanon

### **Annexes:**

- A. [Demining group conducting QA] Accident Report dated 05.05.03.
- B. [Demining group being subjected to QA] Investigation Report dated 03.05.03.
- C. IMSMA Accident and Casualty Reports.
- D. Map of the General Area.
- E. MACC SL Clearance Plan for M/F 1272.



- F. CV QA MDD Officer [the Victim].
- G. CV MDD Handler.
- H. CV Site Supervisor.
- I. Najem Medical Report.

**Copies to:**

MACC SL Operations Department.  
 NDO.  
 [Demining group conducting QA].  
 [Demining group being subjected to QA].

### Victim Report

<p><b>Victim number:</b> 513</p> <p><b>Age:</b> 25</p> <p><b>Status:</b> deminer</p> <p><b>Compensation:</b> not made available (insured)</p> <p><b>Protection issued:</b> Frontal apron Long visor Safety spectacles Gloves</p>	<p><b>Name:</b> Name removed</p> <p><b>Gender:</b> Male</p> <p><b>Fit for work:</b> not known</p> <p><b>Time to hospital:</b> 32 minutes</p> <p><b>Protection used:</b> Frontal apron, Long visor, safety spectacles</p>
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**Summary of injuries:**

INJURIES

- minor Arm
- minor Face
- minor Leg
- severe Eye
- severe Hand

COMMENT

See medical report.

### Medical report

The Bol report stated that the Victim “suffered blast and fragmentation injuries to his face, right hand, front of right thigh and left forearm”. His right eye was “bruised and grazed” and his “right hand received a deep cut from the base of the thumb into to the palm. The right hand middle finger was also fractured.”

An Interim accident report listed his injuries as:

- Blast injury to face and right eye
- Blast injury to right hand
- Laceration to the right hand palm.

- Blast lacerations to the left forearm.
- Blast lacerations to front of right thigh.

An IMSMA record sheet gave the Victim's DoB as 09/06/78 and his time to arrival at hospital as 40 minutes. It described his injuries as "Sub conjunctival haematoma R eye with erosion intact. Deep soft tissue injury palmar/themar aspect of R hand. Lesser lacerations to inner L forearm and frontal R thigh."

Two demining group accident reports are reproduce (from scanned pages) below.

**DEFINITIVE CASUALTY REPORT**

Name		Passport ID Number	
Organisation		Position	DEMINEUR EA
Age / DOB	25 090678	Religion	CHRISTIAN
Blood Group	O Pos	Known Allergies	NONE
Cas No From Initial Report	1	Date	080803
Description of Injuries	(1) DEEP SOFT TISSUE INJURY PALMAR/THEMAR ASPECT OF (R) HAND. (2) SUBCONJUNCTIVAL HAEMATOMA (R) EYE WITH EROSION OF CORNEA, GLOBE INTACT. (3) LESSER LACERATIONS TO INNER (L) FOREARM AND FRONTAL (R) THIGH.		
Treatment Given (Specify any Medication / IVs)	ALL WOUNDS DRESSD. PRESSURE BOUNDAGE TO (R) HAND. PETHIDINE 100MG IM Q2H O2 THERAPY IN TRANSIT 8L/MIN.		
Special Notes or Observations	PATIENT CONFIDENCE STABLE AT MARJAYOUN HOSPITAL. OPTHALMIC OPINION TO TRANSFER TO HANNOUN HOSPITAL SAIDA. TRANSFERRED AT 0900HR FOR OPTHALMIC ULTRA-SOUND, CAT SCAN AND SURGICAL FOLLOW-UP.		
Treatment Given By: _____			
Time Handed Over: 0740 To: MARJAYOUN HOSPITAL			

**FIELD INJURY REPORT**

0 Pos

FULL NAME:	APPOINTMENT:	EMPLOYEE ID:	
PLACE of INJURY:	Demineur		
SHA 15	DATE of INJURY:	TIME of INJURY:	
	08-08-03	0707	
LIKELY CAUSE OF INJURY:			
mine blast			
INJURIES SUSTAINED:			
- Blast to face (bleeding (R) eye - Blast injury (R) hand - Blast laceration (L) forearm - Blast laceration (R) thigh (front)			
TREATMENT GIVEN:			
Pressure bandage (R) hand Dressings on the (L) forearm and the (R) THIGH Pethidine 100 mg IM at 7:21 O2 8L per min			
CLINICAL OBSERVATIONS:	TIME: 0728	TIME:	TIME:
BP:	110/70		
PULSE:			
TEMP:			
RESPONSE: *	A		
* : A = Fully Alert, V = Reacts to Voice, P = Reacts to Pain, U = Unresponsive.			

## Analysis

The primary cause of this accident is listed as "Inadequate training" because the Victim was a QA officer and was unaware of the operation of a very basic fuze. The failure of his employer to ensure that he was aware of basic safety needs is the "Management/control inadequacy" listed as the secondary cause. The MACC acknowledged the need for better training, but blamed the site supervisor for the accident. Given that the site supervisor was subject to the authority of the QA officer for all aspects of safety, this seems a trifle harsh. In the absence of any reason for wanting the fuze having been given, it seems likely that the Victim was souvenir collecting.

Anyone with hands on minefield experience in areas where MUV fuzes or the No.4 igniter are present should be expected to be aware of the very basic way in which they operate. The fact that the QA company employed people without ensuring they had adequate training raises questions about other aspects of their QA expertise. The fact that the MACC investigator also seemed unaware that the igniter he photographed did not have a detonator attached is a further worry (but may reflect a difficulty with the English language).

Questions over why the fuze was lying in an area supposedly cleared by both a machine and by dogs were not adequately answered.

## Related papers

Other documents made available included the CVs of those involved. To preserve confidentiality, these are not reproduced. The victim's experience was wide enough for it to be reasonable to expect that he would have acquired a basic knowledge of how a simple fuze functioned.

The Demining group conducting the QA (for which the Victim worked) made an internal investigation. Their report is reproduced below, edited for anonymity.

[Demining group] SOUTHERN LEBANON MINE RELATED ACCIDENT REPORT ON THE 1<sup>ST</sup> MAY 2003

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1. Initial Report
2. Injuries Sustained
3. Interviews with [the Victim]
  - 3a Interview 01 pm 010503
  - 3b Interview 02 am 020503
  - 3c Interview 03 pm 020503
4. Recommendations
5. Conclusion
6. Acknowledgements

### ANNEXES

- A. Statement of [name excised]
- B. Statement of [name excised]
- C. Statement of [name excised]
- D. Statement of [the Victim]
- E. IMAS Accident Report
- F. IMSMA Accident Report
- G. Doctors and Hospital Reports
- H. [Demining group] London log of events
- I. CV of [the Victim]

## 1. INITIAL REPORT

This is a detailed report regarding the Mine Related Accident involving [the Victim] out side the [Demining group] QA Office on 1<sup>st</sup> May 2003.

[The Victim] is the Mine Detection Dog (MDD) Quality Assurance Officer employed by {Demining group} working on the UNOPS contract assigned to the Mine Action Center Southern Lebanon (MACC SL)

His duties consist of the monitoring of both [Demining group 1] and [Demining group 2] MDD assets through out the four OES Areas involved in Operation Emirates Solidarity.

During the Thursday the 1<sup>st</sup> May 2003 [the Victim] was involved in the QA of [Demining group 1] MDD Teams 3,4 and 5 on two different sites Booby Trap 166 and Mine Field 288 Grid 7089

6702 close to the village of Majda-Jun in OES 1. These two sites are situated close to each other and his time on site was between 0730 hrs and 0930 hrs.

According to the [Demining group] radio log the movements of [the Victim] was that he departed from mine field 288 on route for Mine Field 1272 at 0935 hrs and arrived there at 0945 hrs. This change of schedule is not unusual in the movements of the MDD QA Officer as the MDD assets are very difficult to locate and are sometimes not in the area they were intended to be as ascertained on the weekly intentions given to [Demining group] by the contractors. On arrival at MF 1272 [the Victim] established that the [Demining group 1] MDD Teams had completed the daily operations therefore no QA was conducted.

At approximately 1155 hrs [the Victim] departed MF 1272 on route for the [Demining group] Office in Tyre.

It is normal routine for all the [Demining group 1] QA Officers to process the daily reports at the end of each daily field visit and [the Victim] tends to conduct this task in the comfort of his apartment, which is situated on the fourth floor of the same building as the [Demining group] Office.

At approximately 1500 hrs he was asked to come to the office by the [Demining group] Project Manager to discuss some problems he had with his leave. After talking with the personnel in the administration office and a very brief meeting with the [Demining group] Project Manager he departed and walked into the communal corridor of the second floor.

At approximately 1520 hrs there was a loud explosion from the direction of the communal corridor. All [Demining group] personnel then rushed into the main section of the [Demining group] Office to investigate the blast.

[The Victim] was standing approximately 3m from the threshold of the main [Demining group] Office door, dazed and bleeding badly from his left hand. Both [name excised] and [name excised] rushed to [the Victim] and assisted him back to the office where they administered first aid.

At this point [name excised] took over control of the casualty while [name excised] went to one of the [demining group] vehicles to collect a trauma pack as instructed by the Project Manager [name excised].

As soon as the blood flow from [the victim]'s left hand was stopped, [three people] assisted [the Victim] to one of the vehicles parked outside where he was given more substantial first aid from the trauma pack.

[The victim] was then taken direct to the Najem Hospital where he received emergency first aid treatment involving an x-ray and then into surgery at 1600 hrs.

The result of the x-ray proved that there were no broken bones in his left hand and that he had full movement in all five digits.

He underwent investigative surgery to establish whether he had suffered any nerve or tissue damage and to remove any foreign bodies, which could have been embedded in his hand. He was kept in over night for observation.

An [Demining group] employee [name excised] stayed with [the victim] until 2300 hrs and returned the following morning at 0630 hrs.

At approximately 1522 hrs the [Demining group] Project Manager informed the MACC SL of the accident.

The accident site was then sanitized to await the MACC QA Officer. After a short investigation of the accident site by [name excised] it was discovered that [the Victim] had detonated a No 9 fuse normally associated with the No 4 Israeli Anti Personnel Mine. The remains of the mechanical part of the igniter were located very close to the accident site. Also fragments of the fuse were found in the vicinity of the accident.

## **2. INJURIES SUSTAINED**

Initial reports of [the Victim]'s injuries are that he has sustained deep lacerations to his left hand including his thumb, three fingers and the palm of his hand. He also sustained some tendon damage to his thumb, which was repaired during surgery. He has some nerve

damage to his fore finger and middle finger along with some small fragmentation lacerations to his face, neck and stomach. [The Victim] has been recommended that he does not travel for at least two weeks and must undergo daily checks at the hospital.

### **3. VERBAL INTERVIEWS WITH [the Victim]**

During the course of the investigation there was a number of official verbal interviews with [the Victim] involving the Project Manager and [the Victim] and also representatives of the MACC SL Board of Inquiry. What follows is a short summary of the contents of those interviews paying in particular attention to statements made by [the Victim], which has a significance bearing on the investigation.

#### **3a Interview 01 pm 010503**

Shortly after [the Victim] had recovered from his surgery the [Demining group] Project Manager visited the hospital to see if [the Victim] was ok and whether he required anything. [The Victim] was still feeling the effect of the anesthetic and although very tired was aware of the presence of the PM at that time. After some exchanges of typical bedside remarks [the Victim] was asked if he knew what had happened, to which the reply was yes. He was then asked where the igniter came from, to which he replied that he had got it from a mine field. He was then asked which mine field, to which he replied 1272.

[The Victim] was then asked did he pick the item up or was he given it, to which he replied without any hesitation the Site Supervisor of 1272 gave it to him.

#### **3b Interview 02 am 020503**

This interview was carried out between [the Victim], [demining group] Project Manager, [name excised] MACC QA Officer and [name excised] LAF QA Officer. During this interview [the Victim] was not ready to talk officially and an alternative time was rescheduled for 1400 that afternoon. However based on the information given to the MACC SL QA Officer regarding the Site Supervisor the MACC QA Officer wanted to confirm what was discussed the night before. The same questions were put to [the Victim] to which he replied with the same answers.

#### **3c Interview 03 1400 hrs 020503**

This interview took place in [the Victim]'s apartment involving the same personnel as the previous interview. The MACC QA Officer [name excised] conducted the interview. [The Victim] was very cooperative and by now had remembered a lot more about what had occurred. The same questions as the previous two interviews were once again put to [the Victim] in which there was no change in his answers. He explained that the Site Supervisor had given him the igniter after [the Victim] had asked him for one. [The Victim] informed the MACC QA Officer that the Site Supervisor had removed the detonator from the igniter with the use of two leatherman tools. Both [the Victim] and the Site Supervisor had noticed that the striker had hit the detonator but had failed to function. [The Victim] then informed the MACC QA Officer that he had been assured by the Site Supervisor that the item was safe and thought nothing more of it. The MACC QA Officer asked [the Victim] if he was familiar with the mechanical workings of the No 9 igniter and its explosive content to which he replied that he knew the basics but not everything. Once [the Victim] had been given a full technical description of the igniter and how it functions he was amazed at how little he did know.

[The Victim] was then asked if he remembered anything about the build up to the accident. [The Victim] replied that although the events are still a little vague he remembers coming into the office and showing [name excised] the igniter making a reference to the fact that it was in very good condition and that the striker had been activated and that it was fully visible at the bottom of the igniter. [The Victim] went on to say that he remembered the brief meeting with the [Demining group] Project Manager and that while on his way out of the office and while looking for something in his pocket located the detonator. [The Victim] continued to say that he then proceeded to screw the detonator back onto the igniter when the item functioned.

#### **4. RECOMMENDATIONS**

It is recommended as a result of this accident that all [Demining group] MDD personnel involved in mine clearance or EOD operations receive further training on the dangers of UXO and mines. At present the QA operation in Southern Lebanon has only one non EOD trained officer, however as a result of this accident all [Demining group] personnel operating in Southern Lebanon will be briefed regarding the conduct of a QA Officer.

An amendment should be made to the [Demining group] Office SOPs stating that under no circumstances should live or dangerous items be brought or stored in any of the [Demining group] premises. Any items of UXO or mines located in the field and required for training purposes will be checked and cleared of any explosives by a qualified Technical Operator and the item will have a Free From Explosives (FFE) certificate and be catalogued.

#### **5. CONCLUSION**

This was a very unfortunate accident that could have been prevented and blame should not fall solely on [the Victim]. [The Victim] is the MDD Officer for the [Demining group] QA operation in Southern Lebanon and has not received any formal training in EOD or Mine Clearance. He received this item from a qualified international Site Supervisor who assured him that it was free from explosives and therefore safe. However he is at fault for receiving this item without any FFE certificate or knowledge of the dangers of the igniter and that can only be put down to naivety and lack of technical experience. It is not fully understood why [the Victim] wanted such an item, however a very important lesson has been learnt through this accident and through [the Victim]'s honesty will hopefully never happen again.

#### **6. ACKNOWLEDGEMENTS**

Acknowledgements go to the [Demining group] staff that were present when the accident occurred, their professionalism and quick reactions during the accident was exceptional. Acknowledgements also go to the MACC SL for their concern, support and assistance and in particular the QA Officer for his guidance during the [Demining group] internal investigation and the consequent follow up investigation. Last but by no means least [the Victim] for his honesty during the investigation, which has had a significant bearing on the outcome.

Signed: [Demining group] QA Project Manager, Tyre, Southern Lebanon

### **Statements**

The following statements have been edited for anonymity.

#### **Victim**

Statement of Incident at the [Demining group] Office on the 1<sup>st</sup> May 2003

On the 1<sup>st</sup> of May 2003 at approximately 11:00 hours, I was conducting QA on [Demining group 1] MDD Teams at Mine Field 1272, supervised by [Supervisor's name excised].

Upon my arrival I found that the MDD teams had completed their daily tasks and were busy with the final measuring of the area searched. During this time I was talking to [Supervisor's name excised], who asked me if I wanted to look at a No 9 striker, the item was in remarkably good condition. I asked [Supervisor's name excised] if the striker was safe as we noticed that the firing pin had already been discharged and there was no collar. [Supervisor's name excised] proceeded to dismantle the striker, he examined the contents of the striker and deemed it to be safe, explaining that the cap of the detonator had already been struck and showed me the characteristics of the strike markings where the cap had been dented by the pin, therefore making the mechanism safe to handle.

I arrived back to Base location at approximately 13:30 hours, proceeded to have my lunch and then returned to the office at approximately 1500 hours, where I performed my normal admin duties and handed in all of my QAE forms to the administration staff.

Mr. [Manager's name excised] was sitting at his desk and I approached him with the above mentioned striker, while [Manager's name excised] was examining the striker he commented on the good condition of the item. He then gave it back to me. I informed my colleagues that I was now going to the internet café. At approximately 15:20 I was walking out of the office doorway and reached into my pocket for my cigarettes as I intended to have a smoke. When I put my hand into my pocket I felt the other component i.e. the detonator, so I took it out and because I had been told it was safe, I did not think twice about it and proceeded to fit it back together, then there was a loud explosion noise. From this point onwards I only remember being put into the vehicle to be taken to the hospital. I vaguely remember parts of being treated in the emergency room and only became fully conscious and aware of what was happening from the next morning of Friday 2<sup>nd</sup> May 2003.

This is a true account of the incident.

Signed: [The Victim], MDD QA Officer – [Demining group]

### **Witness 1**

Mine Incident Statement, [Manager 2's name excised], Date 1 May 2003

At 1520 today, I was sat at my work desk in the [Demining group] office when [the Victim] walked behind me and headed out of the office into the corridor. He had only walked 2m when a loud bang was heard coming from him.

I immediately turned and saw [the Victim] turn back towards our office and his face peppered in blood and his left hand bleeding profusely.

The bang drew the attention of all [Demining group] personnel in the office out into my work desk area. By that time [the Victim] had walked back to just inside our office door.

I approached him and realizing what had happened stopped him and told him to raise his left arm to slow the bleeding down. [Name excised] (AG Project Manager) called out for someone to fetch a trauma medical pack out of one of the vehicles parked outside our office. I ran down stairs and took out a trauma pack from one of our vehicles.

As I turned to head back towards the office, [the Victim] was being escorted by [Manager's name excised], [Name excised] and [Name excised] our Lebanese secretary. [Manager's name excised] had wrapped [the Victim]'s hand with a kitchen tea-towel which [the Victim] was gripping in his injured hand.

We all jumped into the vehicle. I sat in the back with [the Victim] to my right and [Name excised] to my left and with the trauma pack on my lap proceeded to re-dress [the Victim]'s temporary dressing. I swapped the tea-towel for a pressure pad and bandaged it around the hand.

We arrived at Najem hospital a few minutes after the incident occurred where [Manager's name excised] and [name excised], acting as interpreter, escorted [the Victim] inside the hospital.

[Name excised] then drove me back to the office where [name excised] and [name excised] were waiting for the investigation team to arrive.

Signed: [Manager 2's name excised] QA Officer

### **Witness 2**

Mine Related Accident Statement 1<sup>st</sup> May 2003

Statement by: - [Manager's name excised], [Demining group] Project Manager

At approximately 1500 hrs on the 1<sup>st</sup> of May 2003 I was situated in my office in Tyre conducting my daily paperwork. The office was busy with my staff completing their daily paperwork involving the QA visits of that day. At this stage Mr [the Victim] was not present in the room as normally he completes his QA early due to the nature of his MDD tasks and had already completed his paperwork.

At approximately 1505 hrs I contacted [the Victim] by telephone to request that he came to my office to discuss some problems he had with his leave, [the Victim]'s apartment is situated within the same building therefore it did not take him long to arrive.

[The Victim] entered the section of the [Demining group] Office in between my office and that of the administration office where Mr [Manager's name excised], [name excised] and Miss [name excised] were situated. He then proceeded into the administration office where he spent a number of minutes talking to [Manager's name excised] and the two female administrative staff.

At approximately 1515 hrs I asked [the Victim] to come into my office where I had some information from London regarding his leave. He sat in front of my desk where we talked for approximately 3 to 4 minutes. After giving him the information he informed me that he was going to the Internet café to download an email that I had sent London regarding his leave.

At approximately 1520 hrs [the Victim] left my office and proceeded through the main corridor of the [Demining group] Office and into the communal corridor of the second floor of the building.

What seemed like only a minute after he left my office there was a loud explosion coming from the direction of the communal corridor, I rushed to investigate the explosion to find that [the Victim] was walking towards the main office door holding his left hand, which was bleeding profusely.

At this stage all the occupants of the office rushed to the assistance of [the Victim]. The closest person to the scene of the accident was Mr [Manager 2's name excised] who was first to assist, he instructed [the Victim] to elevate his hand in an attempt to stop the flow of blood.

On seeing the severity of the injuries I immediately shouted for someone to go and get a trauma pack from one of the [Demining group] vehicles parked outside the building. At this stage [name excised] was also assisting [the Victim] by placing a towel on the wound. Once the towel had been wrapped around [the Victim]'s hand he was then assisted down to the vehicle where [name excised] applied a more substantial dressing on his injuries from the trauma pack while on route to the nearest hospital.

At approximately 1522 hrs I contacted the MACC SL QA Officer Mr [name excised] and informed him of the accident.

The sequence of events during this accident happened so fast, however to my knowledge this is an accurate account of the accident.

Signed: [Demining group] QA Project Manager, Tyre, Southern Lebanon.