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DDAS Accident Report

Accident details

Report date: 11/07/2011	Accident number: 735
Accident time: Not recorded	Accident Date: 14/03/2007
Where it occurred: CBU-203, Batoulay, Ej-Jenoub, Area 7	Country: Lebanon
Primary cause: Field control inadequacy (?)	Secondary cause: Unavoidable (?)
Class: Missed-mine accident	Date of main report: 14/03/2007
ID original source: 002/2007	Name of source: UN MAC SL
Organisation: [Name removed]	
Mine/device: M77 submunition	Ground condition: agricultural (recent)
Date record created:	Date last modified: 11/07/2011
No of victims: 0	No of documents: 1

Map details

Longitude:	Latitude:
Alt. coord. system: UTM: 707270/3679376	Coordinates fixed by:
Map east:	Map north:
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

inadequate equipment (?)
protective equipment not worn (?)
non injurious accident (?)

Accident report

A report of this incident was made available in 2008. Its conversion into a DDAS file has led to some of the original formatting being lost. Text in square brackets [] is editorial. The report is reproduced below, edited for anonymity.

MINE ACTION COORDINATION CENTRE, SOUTHERN LEBANON DEMINING INCIDENT
REPORT 002/2007

Report on Incident that occurred on the 14th March 2007 at CBU 203, Batoulay, Ej-Jenoub

INDEPENDENT INVESTIGATION REPORT 002/07, FOR [Demining group] DEMINING INCIDENT AT TASK CBU-203 14 March 2007, No 002/07

1. BACKGROUND

Date: 14 March 2007

Time of Incident: 0730 hrs approx.

Location: Batoulay, Ej-Jenoub, Area 7, Lebanon

Task: CBU-203, Task Dossier 7-002

UTM of Task: 707270 – 3679376

Task Start / Finish Date: 17 Oct 06 / 21 Dec 06

Organisation Involved: [Demining group]

Unit: [Demining group] BAC Team 8

Supervisor: [Name removed] – BAC Team 8

Reported by: [Name removed] Farmer (land owner).

Reported to: [Name removed], [Demining group] Demining Supervisor.

Time of Incident report to MACC QA: 0800hrs approx.

Organisation POC: [Name removed], [Demining group] Demining Supervisor.

Investigation Date/Time: 14 March 07, 0915hrs

Investigation Location: Task CBU-203

Investigation Team: Lt. [Name removed] (LAF Plans Officer), [Name removed] (MACC SL QA Officer).

ERW Type: US M-77 Submunition

Accreditation Details: Provincial Accreditation - 14 Sept to 13 Oct 06; Full Accreditation 18 Nov 06 to 31 Dec 07

2. DETAILS OF INCIDENT

On 14 March 2007, one M-77 Submunition was located by a local farmer while harvesting his banana plantation, at Task CBU-203, in an area which had been cleared by [Demining group] using Sub-surface Battle Area Clearance (BAC) procedures. The farmer reported the find to [Demining group].

After receiving information from the local farmer; [Name removed], [Demining group] Demining Supervisor, went to the CBU-203 to conduct an investigation. After meeting the farmer and confirming the information, the item was marked and photographs taken. [Name removed] reported the incident to [Name removed], MACC SL Operations Officer. [Name removed] was informed that local farmers were conducted harvesting at the time and that due to the proximity of the submunition, it was advisable to remove the item for the safety of the local population. [Name removed] therefore, authorized for the removal of the item after sufficient photographic evidence had been obtained of the incident site. [Name removed], MACC SL QA Officer was subsequently informed of the incident and prepared for the MACC SL investigation.

At 0900 on 14 March 2007, after liaison with [Name removed], the MACC SL investigation team, comprising Lt. [Name removed] and [Name removed], departed for CBU-203. After arriving at the CBU-203 the MACC SL investigation team interviewed Magnus, the local farmer and examined the site.

Evidence

The ground was flat, comprising soft soil and covered with banana trees. The local population was harvesting the banana trees at the time of the investigation and excavating trees to subsequently sell.



[The incident site – with investigators not wearing PPE.]

The M-77 had been removed by [Demining group], although, its location had been marked with red topped pickets and hazard marking tape. The hole from which the submunition had been removed was still obvious and it was therefore, possible to measure the depth. The item had been situated in the middle of a clump of four banana trees and the farmers had removed two of the trees prior to discovering the submunition. The submunition was to the front and in the center of the two remaining trees.



[The M77]

According to the information received from [Demining group] (photos taken by [Demining group] prior to the removal of the item, interviews and measurements recorded during the investigation); the submunition was at a depth of 4-5 cm from the surface of the ground. It was situated at a distance of approximately 10 cm from the two trees removed. It would therefore have been possible to check the area with the Minelab detector.

The M-77 removed from the orchard was recovered to another [Demining group] BAC task in the vicinity and shown to the investigation team. It was unarmed and complete.

Interview with [The finder]

Mr. [Name removed] informed that he discovered the submunition at 0730-0800n on the 14 March 2007, while harvesting his banana trees and had informed [Demining group].

Interview with [Demining group representative]

[Name removed] informed that Mr [Name removed] had informed [Demining group] of the find and that he had subsequently conducted an investigation. On confirmation of the location and item, he had informed [Name removed], MACC SL Operations Officer. After receiving authorization from [Name removed], he had removed the item. Photographs of the site were taken prior to its removal.

[Name removed] reported that after the initial threat assessment, it had been decided to conduct sub-surface clearance at CBU-203. As there was a high probability of sub-surface submunitions (see below – Background) it was decided that walking in the area prior to clearance should be avoided. Due to the nature of the ground; flat with soft soil and banana trees, it was decided to conduct clearance using Minelab F4A1 detectors to search 1 metre wide lanes and that the UPEX 740 Large Loop Detector (LLD) would be used every 3rd metre. Submunitions were located at depths up to 38 cm and [Name removed] explained that all detector signals were investigated until the cause confirmed. All area within the task clearance boundary had been searched using sub-surface BAC clearance procedures including areas between trees, where additional submunitions had been located during clearance. According to [Name removed], the majority of submunitions located were unarmed as the dispenser had opened at a lower than usual height, therefore, not allowing sufficient time for them to arm.

Background

CBU-203 is located within a banana plantation near Batoulay. According to information received from [Demining group] during the investigation, rocket attacks resulting in a high level of M-77 submunition contamination.

[Demining group] commenced BAC operations at CBU-203 on 17 October 2006. Initially it was planned for surface clearance to be conducted, however, after an assessment was made by [Demining group] and MACC SL operations, it was decided that there was a requirement for sub-surface clearance. The decision was based on evidence that there was a high probability of sub-surface submunitions. The evidence was as follows:

The local farmer reported that 4-500 submunitions had been removed by the local population from the plantation.

The submunitions had been dispensed at a low height from the cluster bomb unit (CBU) and therefore, landed at a higher velocity than usual.

The soil in the plantation was extremely soft at the time.

The plantation was a sparsely vegetated at the time of the attack.

CBU-203 was completed by [Demining group] on 21 December 2006 and a QA Completion Survey conducted by the MACC SL at the task on 14 February 2007.

3. CONCLUSIONS

On 14 March 2007, a local farmer discovered an M-77 submunition while harvesting banana trees in his plantation, which had been cleared by [Demining group] using sub-surface BAC procedures. At the time of the cluster strike, the ground was extremely soft and an accurate threat assessment by [Demining group] had ensured that sub-surface clearance operations were conducted.

The submunition had been positioned in between four banana trees and was discovered by the farmer after excavating two of the trees. The M-77 had been at a depth of 4-5 cm and at a distance of approximately 10 cm from the two trees removed. The [Demining group] Demining Supervisor confirmed that additional submunitions had been located below the surface in similar areas during clearance operations and that the submunition should have been cleared by [Demining group]. The MACC SL investigation team concurs with the [Demining group] Supervisor's findings and concludes that the M-77 submunition was missed during [Demining group] BAC operations at CBU-203. The incident is therefore, considered as Preventable.

4. CHRONOLOGY OF EVENTS

14 March 2007

0730-0800: [Name removed], a local farmer discovered an M-77 submunition at CBU-203 and reported [Demining group].

0700-0800: [Name removed], [Demining group] Demining Supervisor, confirmed the information and marked the item at CBU-203.

0800: [Name removed] informed [Name removed], MACC SL Operations Officer, of the incident.

0805: [Name removed] informed [Name removed], MACC SL QA Officer of the incident.

0900: MACC SL investigation team departed MACC SL base for the incident site.

0920-1020: MACC SL conducted investigation at CBU-203.

1330hrs: MACC Investigation Team departed CBU-19.

5. RECOMMENDATIONS AND FURTHER ACTIONS

[Demining group] returns to CBU-203 as a matter of urgency and conduct sub-surface sampling of the cleared area. The sampling shall be conducted in the following manner.

- In and around clumps of banana trees or in circumstances where clumps of trees have been removed; the previous location.
- The size of the area to be searched shall be dictated by the area covered by the trees however, as a minimum, the ground within the clump and a distance of 20cm outside the tree clump is to be subsurface cleared.
- A minimum of 10 tree clumps shall be searched. If a submunition is located during sampling then a 10 metres square shall be cleared around the item for verification purposes.
- The minimum clearance depth shall be 20 cm.
- The MACC SL Operations department must be informed immediately if any items of Explosive Ordnance are located.
- The MACC SL Operations Officer shall liaise with the [Demining group] Demining Supervisor pertaining to the sampling operation at CBU-203.
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6. ADDITIONAL INFORMATION

See the following:

- Annex A – Photographs of Incident Site
 - [Demining group] Internal Investigation Report – to follow. [Not made available]
- Report Written By: [Name removed] LAF Plans Officer, [Name removed] MACC SL QA Officer

14 March 2007

1. Comments by the MACC SL Chief of Operations

[Name removed], UN Chief of Operations, MACC SL

Seen/Agreed

2. Comments by the MACC SL Programme Manager

[Name removed], UN Programme Manager, MACC SL

Seen/Agreed

3. Comments by the NDO Representative to MACC SL

[Name removed], NDO Representative, MACC SL

[None]

Analysis

The primary cause of this incident is listed as a *Field Control Inadequacy* because the demining group accepted that the device had been missed and should have been found if procedures had been conducted correctly. The secondary cause is listed as *Other* because it is possible that the presence of the banana trees made it impossible to search the area effectively using their approved methods.

This demining group deployed effective detectors (not the inexpensive stick-detectors favoured by others) and seem to have used thorough procedures. It is ironic that this is the one case on record where the stick-detector might have been more effective than the much better Minelab – because its absence of a search head means that it could have been manoeuvred between the closely bunched tree trunks. The absence of this tool is the “Inadequate equipment” referenced under Notes.

There is a significant contrast between the outcome of this incident – involving a responsible NGO who made no attempt to conceal the fact that a munition between closely spaced banana trees had been missed and the incident involving a commercial demining company on 14th June 2007 in Lebanon. In one, the organization was totally transparent, admitted fault, and a detailed investigation concluded that double-checking a significant area with sub-surface search procedures was required. In the other, the organisation was less than transparent, no investigation was conducted and no sensible remediation effort was required.

The UN MACC SL investigators attended the site and were photographed without PPE – despite determining that a risk remained and areas needed to be researched. This double-standard regarding the use of PPE is regrettably common.