5-7-2014

DDASaccident823

Humanitarian Demining Accident and Incident Database
AID

DDAS Accident Report

Accident details

Report date:	16/11/2019	**Accident number:**	823
Accident time:	10.05	**Accident Date:**	07/05/2014
Where it occurred:	Ayta al Jabal village	**Country:**	Lebanon
Primary cause:	Unavoidable (?)	**Secondary cause:**	Unavoidable (?)
Class:	Excavation accident	**Date of main report:**	07/05/2014
ID original source:	05/2014	**Name of source:**	LMAC
Organisation:	[Name removed]		
Mine/device:	BLU-63	**Ground condition:**	agricultural (abandoned); hard; rocks/stones
Date record created:		**Date last modified:**	16/11/2019
No of victims:	1	**No of documents:**	2

Map details

Alt. coord. system: UTM 724757 3673235 **Coordinates fixed by:**

Accident Notes

inadequate equipment (?)

request for machine to assist (?)

squatting/kneeling to excavate (?)

Accident report

A report of this accident was made available by the national mine action authority in 2019. Some of the original formatting has been removed but the original report is held on file. The substance of the report is reproduced below, edited for anonymity. Text in square brackets [ ] is editorial. Battle Area Clearance (BAC) is used in this country to describe a sub-surface and visual search for cluster munitions.

The Board of Investigation report records that this was a BAC accident involving an "uncontrolled detonation" of a submunition. It was investigated at Ayta el Jabel on 7th May 2014 by the Chief of QA from the Regional Mine Action Centre (N).

1. Introduction

In accordance with National Mine Action Standards (NMAS), the Chief of RMAC [Name removed] issued a Verbal Convening Order on Wednesday the 7th of May 2014 for an accident investigation Board of Inquiry (BOI).

The board member is [Name removed] Chief of QA.

This is a comprehensive report by the Board of Inquiry (BOI) into the [International demining NGO] BAC Accident that occurred on the 7th of May 2014 which is based on the RMAC-N

investigation, statements from [International demining NGO] personnel involved in the accident and evidence from the accident site.

The accident occurred at 10:05am (local time) on the 7th of May 2014 in Area 2-002 CBU-764 Coordinates 36S 724757-3672325 which is located in Ayta el Jabal village.

The BOI is an impartial investigation conducted by the RMAC-N on behalf of the Lebanon Mine Action Centre (LMAC). The primary objective of the BOI is to examine evidence in order to conclude the cause of the accident and make recommendations for the prevention of further accidents.

2. Executive summary

On the 7th of May 2014 at [International demining NGO] task CBU-764, an uncontrolled detonation of a BLU-63 sub-munition occurred while [International demining NGO] searcher [the Victim] was removing stones in his lane and led to his death.

[The Victim] sustained severe injuries from fragmentations of the detonated BLU-63 in the whole face, amputation of the five fingers in the left hand, partial amputation in the right arm, fragmentations in both hands and above the ankle of the left foot .

Based on all available evidence, the BOI team concludes that there was no breaching of [International demining NGO] SOPs and NMAS and the accident was an act of misfortune.

In addition, the searcher was following the correct procedures and the accident happened unintentionally.

3. Location of accident~

Task No/Team No.: CBU-764, Area 2-002/BAC44

Ayta al Jabal village.

Grid ref.: UTM 724757 3673235

Map Ref: Satellite image

4. Date and time of accident

7th of May 2014, 10:05 (local time)

5. Reported by: [Name removed] Operations Manager [International demining NGO]

6. Reported to: [Name removed], Chief of RMAC-N

7. Person(s) Involved

[The Victim], Searcher in BAC4, ID No. 69487

8. Investigation team

[Name removed], Chief of QA, RMAC-N 3

9. Date and time of investigation

7th of May 2014, 10:55am (local time)

10. Execution of the Investigation

Approach to Site

The accident site is located at IMSMA Task number CBU-764 which is located in Ayta al Jabal village.

The RMAC-N investigation team [Name removed] with RMAC QA officer [Name removed] drove to the accident site.

After a site briefing and arrival formalities, the team began the investigation. Due to the site being a BAC task the investigation team approached the accident site accompanied by [International demining NGO] Senior QA Officer [Name removed].

Process was visual and verbal.

11. Evidence

11.1 Ground

Accident Site

The location of the accident was on the southern side of a paved road. The accident area consists of a rocky lane which separates between two vegetation lands.

The area of the accident was in the lane of the searcher [the Victim].

[The arrow shows where the accident occurred.]

Crater: The crater diameter was about 30 cm with 20 cm depth.

[The crater is in front of the rocks with a broken rock lying in it.]

Marking

Marking in general on the task was in accordance with [International demining NGO] Lebanon SOPs and NMAS, marked except for the base stick that was found at 1.5 meters backward from where the searcher was on his access lane due to the blast of the explosion.

[Picture shows the position of the broken base stick.]

11.2 Vehicle(s) and Equipment

Ambulance: One ambulance and medic was located at CBU 764 at the time of the accident.

Searcher Tools

The schonstedt locator was located behind the searcher and no damage happened to the locator.

[The pristine appearance of the locator (compared to the base-stick) may imply that it was not in this position when the accident occurred.]

Personal Protective Equipment (PPE)

As for the [Victim's] body armor, there was many small holes from the outside but no fragmentations broke through in it and it was covered by blood in the top part.

Concerning the visor, it is obvious from the holes that the fragmentations has been penetrated from the outside layer through the visor to his face until his brain .

[The picture shows exit holes on the side of the helmet.]

11.3 Explosive Ordnance involved in accident

The type of explosive ordnance involved in the accident is believed to have been a BLU-63 submunition.

11.4 Casualty Information

Casualty's position: Searcher [the Victim]

According to the injury and to the statements, he was squatting in his lane and trying to move stone from the rocky lane.

Description of Injuries: [the Victim] sustained severe injuries from fragmentations of the detonated BLU-63 in the whole face, amputation of the five fingers in the left hand, partial amputation in the right arm, fragmentations in both hands and left foot above the ankle.

11.5 Interviews

The following [International demining NGO] personnel were interviewed by the RMAC-N BOI team on 7th and 13th of May 2014 at CBU-764: [International demining NGO] FOO, and [International demining NGO] Team 4 Supervisor, TL and Medic.

[A written record of the interviews was not made available.]

12. Accident Details (Circumstances / Sequence of Events)

The following information is based on an assessment of the evidence obtained by the RMAC-N BOI team at the accident site and from witness statements.

Chronology of Events (According to witness statements and site documentation) 7th May 2014.

06:45 - Arrival at the site. Morning brief by [the Site Supervisor] and Locators tests.

07:15 – Start of operations

10:05 - Accident happens

10:06 - The site supervisor [Name removed 1] called the FOO [Name removed 2] who, immediately, informs OPS manager, radio room and PM. [Name removed 1] was calling [Name removed 2] while the medic was on his way to the injured searcher into the site and quickly was moved from the accident site to a Medevac safe site in the road and was receiving first aid from the team medic [Medic's name removed] and Dr. [Name removed] ([International demining NGO] medic coordinator).

10:09 - POD team 2 , who were working in the vicinity of the site, arrived with their ambulance and POD medic ([2nd Medic's name removed]) to assist in the first aid .

10:10 - PM informs RMAC Chief.

10:15 - OPS manager, FOOs arrive to the site.

10:16 – [The Victim] is extracted from the site after initial stabilization is performed in safe area and leaves with Team 4 ambulance to Tebnin hospital. ([Two named people] leave with the ambulance to assist.

10:17 – [The FOO] and Deputy Team leader close the area of accident.

10:20 – [The Victim] arrives at Tebnin hospital.

10:55 – [The Chief QA Officer] from RMAC arrives at the site, with RMAC QAO [Name removed], and starts investigation.

11:30 – [The Victim] is pronounced dead.

The investigation was followed up by a visit to the hospital to take the statement of the casualty on the 07th of may 2014 by [The Chief QA Officer].

12.1 Medical Assistance and Evacuation (procedure, treatment, equipment.)

On the 07th may 2014, there was one medic [Name removed] at task CBU 764 who was positioned with the ambulance and driver at the control point during clearance operations.

At 10:05 hrs an explosion occurred. The medic heard the explosion inside the site, immediately she was led to the accident location by one of the searchers. Finding one casualty on the ground, she started first aid at the beginning with senior Medic [Name removed] and the assistance of the POD medic [Name removed] because blood was seen on the face and eyes of the searcher and then she found a partial amputation on his left arm and full amputation of five fingers. Then the searcher was evacuated to the hospital after extracting and finishing first aid.

According to the statements from the [International demining NGO] personnel at the site, the time taken for the casualty to reach the hospital of Tebnin from the minute the accident occurred was approximately 15 minutes.

12.2 Geography and Climate

The area of the accident site is located in Ayta Al Jabal village. The task site is on a rocky straight area. At the time of the accident the weather was calm, sunny and warm with clear sky. Visibility was good.

12.3 Communications

The [International demining NGO] team utilized handheld VHF Radios for internal team communications. Communications between the team and the RMAC-N were maintained by VHF radio. The team also had access to mobile phones.

12.4 Command and Control

The [International demining NGO] team composition was in accordance to their SOP; previous internal and external QA reports had indicated good command & control at all levels.

12.5 Quality Assurance and Quality Control

External QA: Between the period 15th February 2012 and the 07th May 2014 a weekly basic RMAC-N QA inspections were conducted at CBU-764. All the QA visits were acceptable.

Accreditation: The [International demining NGO] team received a renewal for the full accreditation on February 2014.

Training: The last training for the team had occurred between the 28 April and 30 April 2014.

13. Details of Non Compliance to Agency SOPs / NMAS / IMAS

The working in the rocky area procedures and the use of the protective equipment as for the visors at CBU-764 were in compliance with [International demining NGO] SOPs and NMAS.

14. Task Status

The status is ‘Current’: Start Date (15.02.2012)

15. Background Information

CBU 764 is a BAC task within the task dossier 2-002 issued to [International demining NGO] by the RMAC-N. During the 2006 Hostilities with Israel, submunitions were dispensed into the area by Israeli bombs and projectiles.

16. Conclusions

From the evidence gathered the board concluded the following:

a. An uncontrolled detonation of US BLU-63 sub-munitions occurred with searcher [the Victim] during removing stones from a rocky lane.

b. The fingers amputation proves that the item was stuck on the bottom of the stone and while the searcher was removing the stone, suddenly the item fell and hit the ground and detonated.

c. Some fragmentations penetrated straight to the head and helmet through the visor which prove that those protective helmets do not provide adequate protection for the head.

d. It's unknown if the Schonstedt has detected the submunition under the stone.

e. The supervisor was away 15 meters from the searcher and this distance is in accordance with [International demining NGO] SOP as for the safety distance between the supervisory person and the searcher, which should be a minimum of 5 meters.

f. The casualty's evacuation from the site to the hospital was conducted in a timely and professional manner.

g. The marking of the site in general was in accordance with [International demining NGO] SOP and NMAS.

h. During the course of the investigation the RMAC-N BOI team received full cooperation from [International demining NGO].

The accident is considered to be conclusive as unpreventable.

17. Further Actions and Recommendations

a. Two days refresher training to be conducted for all [International demining NGO] BAC teams and to focus on following the correct procedures whilst conducting clearance in rocky areas.

b. Closer supervision from all levels to ensure there is strict adherence to [International demining NGO] SOP especially on rocking areas.

c. Any searcher should be careful and cautious in moving stones,.

d. In such situation, stones to be remotely moved.

Report Written and Agreed By:

RMAC-N Chief of QA, RMAC-N Chief of OPS, Chief of RMAC-N

Victim Report

Victim number: 1041 **Name:** [Name removed]

Age: 48 **Gender:** Male

Status: deminer **Fit for work:** DECEASED

Compensation: not made available **Time to hospital:** 15 minutes

Protection issued: Frontal apron, Long visor **Protection used:** Frontal apron, Long visor

Summary of injuries: severe Arm; severe Face; severe Hands; severe Head; severe Leg

AMPUTATION/LOSS: Fingers

FATAL

COMMENT**:** No medical report was made available. The Victim was pronounced dead at 11:30, one hour and 25 minutes after the accident.

Related papers

Press report from http://www.dailystar.com.lb/News/Lebanon-News/2014/May-08/255688-norwegian-demining-team-member-killed-by-blast.ashx#axzz32Lzs4HYj

7th May 2014 [International demining NGO] Lebanon

[Name removed] demining team member killed by blast May 08, 2014 12:22 AM

SIDON, Lebanon: A member of a [Name removed] demining team removing Israeli cluster bombs in south Lebanon died Wednesday after being wounded in a minor explosion.

[The Victim], 48, was wounded in the explosion while the team was removing cluster bombs from a field in Ayta al-Jabal.

Israel dropped around 4 million cluster bombs in Lebanon during the 2006 war, most during the last 48 hours of the conflict, according to United Nations estimates.

Analysis

The primary and secondary causes of this accident are listed as ‘Unavoidable’ because the independent investigators found that the Victim had been working in an approved way when the accident occurred.

The plastic helmet used with this visor is not sold as offering any ballistic protection, merely as a ventilated head-support for the visor, so it did not ‘fail’ to protect because it was never designed to do so. The 5mm polycarbonate visor has a NATO STANAG V50 rating of around 260 m/s and (when made without stresses) can provide very effective protection against blast and environmental fragmentation - but rather limited protection against metal fragmentation. The damaged face of the visor shows that it stopped the small environmental fragmentation. The body armour used gave protection against fragments flying at up to 450 m/s and was not compromised. For a visor to provide the same protection it would need to be more than 13mm thick, and that is usually considered to be too heavy for protracted wear.

It is not clear how stones and boulders in the search lane could be remotely moved, as recommended in the report. A small remotely-controlled machine with a hydraulic arm and a gripping tool capable of lifting stones and moving them to a safe area would be required.