

1-10-2007

DDASaccident559

Humanitarian Demining Accident and Incident Database
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DDAS Accident Report

Accident details

Report date: 07/02/2008	Accident number: 559
Accident time: 10:30	Accident Date: 10/01/2007
Where it occurred: UNIFIL002 CBU-33, Zibqin Village, Nr Tyre Cty, Tyre District	Country: Lebanon
Primary cause: Unavoidable (?)	Secondary cause: Inadequate training (?)
Class: Demolition accident	Date of main report: 21/01/2007
ID original source: None	Name of source: UNMAS
Organisation: [Name removed]	
Mine/device: Ordnance	Ground condition: rocks/stones
Date record created:	Date last modified: 07/02/2008
No of victims: 1	No of documents: 2

Map details

Longitude:	Latitude:
Alt. coord. system: UTM 710933?672861	Coordinates fixed by:
Map east:	Map north:
Map scale:	Map series:
Map edition:	Map sheet:
Map name:	

Accident Notes

metal-detector not used (?)

inadequate training (?)

Accident report

The report of this accident was made available in February 2008 as a collection of files and pictures. Its conversion to a DDAS file means that some of the original formatting has been lost. The substance of the report is reproduced below, edited for anonymity. The original files are held on record. Text in [] is editorial.

Complete Accident Report

Minefield Task Number: UNIFIL002 CBU-33

Location: Zibqin Village (710934—672861)

Date/time of accident: 2007-1-10 10:30

Date of report: 2007-1-21

Name of accident investigator: [Name removed]

1 Description of Mine Accident:

1.1 general information

On 10 Jan 2007, three days after a heavy rain, it is cloudy and partly sunny.

The 1st platoon of [UN Military PK force] demining company was tasked for UXO clearance at a distance about 600 meters away from village Zibqin. Its major job was to search and clear the UXO contaminated area numbered CBU-33 (710989—672842).

The team took the method of visible checking. The procedure included 2 sub-teams searching the same patch of area twice.

1.2 description of the site

The working site surrounds a bricks factory and stretches northwest to an open field with thorny vegetations. Existence of CBU type M85 was once confirmed after the war. However, LAF and local had cleared some part the area before the team's arrival. And indeed, splinters and shrapnel of CBU type M42 were found during the team's search and checking.

[From IMSAM form] The area is named Task area CBU-33 as assigned by UN MACC SL. It surrounds a bricks factory at the end of a branch road from Bravo road at village Zibqin. As told by the workers of the factory, some CBU typed M85 were once found around the area. And LAF has cleared the area but the team still found some M42 CBU thereafter.

1.3 accident description

0730hrs: Team departed from UN position 5-10

0810hrs: site preparation and checking of deminers' condition

0825hrs: on-site briefing by team leader and clearance method instruction. Clearance work started.

1020hrs: half body remains of an unexploded 155mm illuminating shell was located at a point (UTM 710933—67286).

1030hrs: Captain [Name removed], the team leader, directed 2nd Sergeant [the Victim], a deminer, to move the UXO about 2 meters from its original place to a pit surrounded by two big rocks for demolition. The deminer was ordered to put a 75 gram TNT block and an electrical detonator at the tail part of the UXO. While the deminer was connecting the wire, the UXO burst into fire by its own and sprayed out flames towards him. The deminer sprang back by instinct to a hollow pit nearby for protection. He got burning injury on face, neck and hands. Due to a sudden rise of a high temperature, the 75 gram TNT block exploded along with the detonator. But the shrapnel didn't hurt the sergeant.

1035hrs: The team leader control the accident site immediately after the accident. Work was stop. Another deminer, Sgt [Name removed], near to the injured one, was directed to take [the Victim] out. On-site doctor, Major [Name removed] carried out first aid for the injured. After assessment of the injured, the doctor decided to take the patient to the nearest hospital, [UN Military PK force] level one hospital.

Meanwhile, the supervisor calm down other deminers and reported the accident to [UN Military PK force] duty officer by radio, sealed off the accident site, took some pictures and evacuated from the site.

1045hrs: The patient was rushed to [UN Military PK force] level 1 hospital.

1120hrs: DCC, JOC and CMO UNIFIL was informed of the accident.

2 Original Initial Accident Report

TIME OF ACCIDENT: 1130hrs 10 Jan 2007 [Time differs from previous record]

LOCATION OF ACCIDENT: Within UNIFIL AO, task dossier by MACC UNIFIL 002 CBU-33. Less than 1 km away form the nearest village Zibqin. The field is scattered with rocks and thorny vegetations.

GRID REF OF ACCIDENT: UTM 711150/672688

TYPE OF INCIDENT: Burning injury by an unexploded 155 mm illuminating shell (half body remains with explosives visible outside) on demolition site.

TYPE OF INJURIES: 2nd degree Burning injury on face, neck and hands

RECEIVING HOSPITAL: [Battalion] Hospital UNIFIL

TIME OF EVACUATION: 1032hrs 10 Jan 2007

OTHER ASSISTANCE REQUIRED: BPT transfer the injured to a higher level hospital

3 A Detailed Sketch Map of the Site [removed]

4 Casualty data

Male: DoB: 2nd September 1981

Status: Military

Nationality: Chinese International Peace Keeping Force

Injuries: An IMSMA sketch shows injuries on face, head and neck; both hands; right leg and right foot

First medical facility reached: 11:32h

Name of first hospital reached: [Battalion] Hospital

Time until first hospital reached: One hour 2 minutes

The person wore protective equipment and it was effective.

See attached medical report from Hospital Hammound at Saida Lebanon

The device involved was: 155mm illumination shell

Situation before accident

Latest training: 2007-1-5

Latest rest time: 2007/01/6—2007/01/7

Working time of the day: 7:30—10:30

Equipment damaged: one PPE, one combat uniform.

Photographs of the site:



[The illumination shell.]



[The accident site.]

Observations, Conclusions, Recommendations and Lessons Learned

After discussing and study, it is concluded that any damaged UXO with explosives/flammable powders visible outside the shell is most likely to come into chemical reactions during the process of removing, although controlled movement will not trigger it off. And the consequence is unpredictable.

Conclusion: Whenever a damaged UXO is located, demolition should be carried out in-situ and no removal and direct contact is allowed.

INFORMATION ABOUT ACCIDENT

WITH [the Victim] ON 10.01.07.

UNIFIL [UN Military PK force] was tasked by MACC through UNIFIL DCC to conduct BAC operation in vicinity of Zibkin village, area – UNIFIL 002.

On January 10 UNIFIL [UN Military PK force] Ops task [UN Military PK force] Demining team #1 (Team Leader [Name removed]) to conduct clearance of CBU 33.

During BAC clearance approximately at 10.20 one 155mm illumination artillery shell was detected by [the Victim], the shell was situated in a stony place, UTM coordinates 711150/672688.

[The Victim] was reported about UXO to the Team Leader Capt Que. After Team Leader investigated the UXO he task [the Victim] to relocate the shell on distance approximately 2 meters for demolition. After relocation [the Victim] tried to place 75 gram TNT charge with electrical detonator inside the shell, in this time explosion happened. Time of the accident 10:30.

As a result of explosion [the Victim] got second degree burn of his hands, right hip and face. Wounded was evacuated to the safe area where he received medical aid from team doctor. At 10.45 [the Victim] was evacuated to [Battalion] position 5-10 and at 15.50 to level 2 hospital on [Another hospital] position.

Accident report

UNIFIL Demining Coordination Cell

FROM: CHIEF DEMINING COORDINATION CELL [Name removed]

SUBJECT: INVESTIGATION REPORT ON THE ACCIDENT AT THE [UN Military PK force] DEMINING SITE.

DATE: 11 JANUARY 2007

INVESTIGATION REPORT ON THE ACCIDENT AT THE [UN Military PK force] SITE IN ZIBQIN, UTM 710934-3672861.

Introduction

On 10th January 2007, at 1045HRS, CDCC received a call from CO [UN Military PK force] that an accident occurred while [UN Military PK force] Demining Team No1 was carrying out humanitarian CBU clearance at Zibqin village. One deminer, [the Victim] got burned injury on his face and hands during the accident and was evacuated back to [Battalion] Hospital at UNIFIL PSN 5-10 for further treatment after given first aid in situ. Senior Medical Officer [Name removed] announced the level burned as level 2. The injured deminer was transported to [Battalion] level 2 Hospital at the day of the accident at 1600 hrs. [The Victim] is in stable condition at the moment.

On 11th January 2007, at approximately 940 hrs Chief of DCC Lt. Col. [Name removed], SODCC Maj [Name removed], Maj [Name removed], Maj [Name removed] and [Name removed] were authorized to conduct investigation on the accident that occurred in the [UN Military PK force] site, in Zibqin area. Quality Assurance officer, [Name removed] representative from UNMACC, joint the Board of Inquiry during the investigation at UNIFIL position in 5-10, as observer during the investigation.

On the arrival at the [UN Military PK force] site, Demining Team Leader CAPT [Name removed], who worked on that site, gave brief information about the accident site place,

showing the boundary of the checked area and the safe lane made to evacuate the injured sapper.

Further discussion was held with the CO [UN Military PK force], demining team Leader and BOI. All details regarding the accident were discussed and the cause of explosion.

On the site BOI figure out:

CBU area checking activity was in the process of preparation for control point to conduct work for Task Dossier UNIFIL-002 CBU-33 Strike with UTM Coordinates 710989-3672842.

Team leader tasked [The Victim] to Recce the area after the safety brief for any visible UXO for the area to be cleared.

The area to be Recce from the opposite side of the control point, from previously cleared area by [UN Military PK force].

During the preparation for control point, [the Victim] reported to Team Leader Capt [Name removed], that an UXO [was] located very close to the planned control point.

A safe lane were made from Control Point to the suspected UXO, Team leader examine the UXO and announced that the UXO is 155mm illumination and it is highly Dangerous and should be disposed before any other activities.

Team leader tasked [the Victim] to relocate the UXO from its original place to a new place few meters beside, which is supposed to be safer for disposal (a gap in the rocky hill was found very close to the original place and it is more convenient for disposal).

A charge was putted up on the UXO, linked with electrical detonator.

Disposal procedures finished and the sapper was just to leave the site, flame happened and after that explosion took a place.

The explosion happened with the UTM coordinates 710934-3672861 and 56 meters away from the location of the CBU strike No 33 with the UTM coordinates 711151/3672668.



[The device did not detonate, merely burned, and was photographed again after it had burned out.]

Sapper was wearing demining PPE and visor.

PPE was partially burned; visor was still in good condition.

The flame get under the visor where no protection for the neck.

[The Victim] get injured because of the flame.

[The Victim] was evacuated from explosion site and received first aid treatment by Dr. [Name removed] and transported to UNIFIL 5-10 at 1045 hrs.

Reason of Explosion:

We are strongly believe that the explosion happened, because there are still a white powder in the illuminating canister in the rear part of the UXO. Any friction or disturb for the white powder make a chemical reaction, a flame will occur and after that explosion will take place for the detonator and TNT Charge that was placed by the deminer for disposal. The white powder was disturbed for unknown reason, which it caused the flame and explosion, [the Victim] gets injured because of the flame.

Recommendations

The following are the recommendations based on the BOI conclusions:

All kinds of illumination UXO should be disposed in Situ unless it is located in built up area, it is required to move or relocate the UXO to safer place.

DO NOT disturb the white powder.

During the examination, relocating or disposal procedures for the UXO, at least it is required to wear PPE EOD-7B during the whole process of disposal.

To carry out Mine Detector during any kind of clearance/UXO operation task.

Victim Report

Victim number: 733	Name: [Name removed]
Age:	Gender: Male
Status: supervisory	Fit for work: not known
Compensation: Not made available	Time to hospital: One hour 2 minutes
Protection issued: Frag jacket Helmet Long visor	Protection used: Frag jacket, Helmet, Long visor

Summary of injuries:

severe Face

severe Hands

severe Neck

COMMENT: 2nd degree burn on face, neck, and hands. No Medical report was made available.

STATEMENTS

Statement 1: Military doctor, medic

As a doctor of [Battalion] Level 1 hospital, I was tasked to accompany the first demining team of CHINBATT for a UXO clearance work at village Zibqin. At about 0830, we reached the work site. And at about 1030, an explosion was heard from about 300 meter from the medical point. A few seconds later, I received the order from the team leader that an accident took place and a CASEVAC was needed. When the injured one was taken to the medical point, I checked him and carried out first aid for his burning injures on face, neck and hands. And then the ambulance rushed him to [Battalion] level hospital. After further examination and treatment inside [Battalion] level 1 hospital, the injured one was in a stable condition. To assure his quick recovery, we decided to transfer him to [Different military] level 2 hospital.

After one night in [Different military] hospital, the injured one was then shifted to Hammound hospital in Saida. Till this moment, it is assessed to be 2nd degree burning injury for the [Victim] on face, neck, and hands

Statement 2: Deminer

On 10 Jan 2007 in the morning, we were tasked for a UXO clearance work at village Zibqin. My job is to assist team leader and remind other sapper whenever necessary. At 1020, we finished search and checking. Sergeant [The Victim] and myself were directed by team leader to demolish an unexploded 155mm illuminating shell with only half body remains. I was observing [the Victim] at a distance about 50 meters away from him and reminded him of fixing demolition fuse and TNT. It was during this period, that an explosion occurred with flames bursting out. [The Victim] sprang back by instinct. But still he got burned on face, neck and hands with his clothes bursting into fire. I ran to his rescue and reported the accident to team leader. I was then directed to take [the Victim] out of the site to the doctor. Later, he was rushed to [Battalion] Hospital.

Analysis

The primary cause of this accident is listed as "Unavoidable" because it seems that the Victim was working to his approved SOPs when the accident occurred.

The secondary cause is listed as "Inadequate training" because the chemical content of the flare was partly exposed and it should have been recognised that it was too sensitive to move. It is very good luck that the Victim escaped injury when his demolition charge also exploded.

Without a Medical report it is unclear whether the Victim's eyes were affected. A photograph showed the top of his protective vest burned through, showing that the flames struck jim in the neck area. The visor used was a cold pressed polycarbonate visor attached to a combat helmet



The sides appear to have been painted to prevent glare, and the front appears flame damaged – possibly on the inside – but with some marks on the outside.

As is frequently the case, the internal investigators seemed to enjoy taking photographs of each other without visors and even when stepping outside the marked area.



The investigators from the National MAC also recommended that the investigators should carry metal-detectors when on site. A metal detector would certainly have made it safer to move around in relative safety.