

DDAS Accident Report

Accident details

Report date: 15/05/2006	Accident number: 212
Accident time: 09:00	Accident Date: 14/08/1998
Where it occurred: Voznica, Praca village, 15k from Pale, Bosanko	Country: Bosnia Herzegovina
Primary cause: Other (?)	Secondary cause: Other (?)
Class: Handling accident	Date of main report: 16/08/1998
ID original source: EB/TH/NH	Name of source: BiH MAC
Organisation: Name removed	
Mine/device: grenade	Ground condition: grass/grazing area hard metal scrap rocks/stones
Date record created: 15/02/2004	Date last modified: 16/03/2004
No of victims: 1	No of documents: 2

Map details

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

Accident Notes

victim ill (?)
inadequate medical provision (?)
protective equipment not worn (?)

Accident report

The demining group appear to have been using a one-man drill and one-man teams at the time of the accident.

A Board of Inquiry report was ordered by the country MAC and carried out by representatives of the regional MACs and an ex-pat Technical Advisor. The report was made available and the following summarises its content. The original BoI report (edited for anonymity) is reproduced under *Related papers* at the "Other documents" tab.

A [demining group] team at the time had 39 members, including cooks and medics. The team completed training on 15th April 1998. Its members had "extensive experience of demining from wartime mine and demolition activities". The rest of the team had been sent elsewhere and a "section" left at the task where the accident occurred. The site was in a mountainous region with grazing and agricultural land. It was on the edge of the village beside a football pitch and between a road and a river. The site was flat and covered with sparse grasses with hard soil with stones and metal contamination.

At 08:30 the team started work. The victim was clearing the central lane of three lanes 25 metres from each other. Vegetation was sparse where he was working and surface munitions or mines could have been easily seen. The victim had made three excavations prior to the accident but they were not of a size to indicate that anything had been found.

At 09:00 an explosion occurred and the victim was seriously injured. He was found lying on his face with half of his end-of-lane marker stick under him and half behind him. The medic attended him "and removed his denture" and he was taken to Sarajevo hospital.

The victim had suffered the amputation of his right hand, wrist and lower portion of his right arm. He also suffered two fragment penetrations to his head. One was "above his right ear and the other appeared to be a superficial neck wound. These fragments were later found to have lodged inside his head, one close to the spine at the base and the other centrally in his skull. "His visor was smoked and full of blood" but his helmet was still on his head.

En-route to the hospital the ambulance was in collision with a sheep on the road and was delayed by roadworks in a tunnel. The casualty remained unconscious throughout the journey.

The device involved was identified as a Dinama hand grenade. An unspecified number of fragments were collected and the identification independently confirmed. The victim's sand-bag (used for scrap metal and contaminated soil) and a large stone had been placed "in the immediate area of the blast".

The victim's protective wear was examined and it was found that marks on the helmet indicated the direction of fragment travel. Soil "identical to the soil colour" in the remains of the victim's sandbag was also on his helmet. The victim's visor was "extensively" penetrated on the same side as the helmet marks. The victim's frag-jacket had taken several strikes in the same area as the helmet and the fragments were held inside the jacket. A photograph in the file showed a single penetration to the armour just below the collar. [The researcher also examined and photographed the armour in June 1999.]

The locally made grenade was fired by striking the grenade striker onto a hard object (such as the stone by the victim's bag) This drives the striker onto the "detonator and delay fuse" and after a 4.5 second delay the device explodes.

The investigators found that it was not possible to prod to a depth of more than "3 to 4 cm" at the site.

The detector used was the MineLab F1A4 and it was found that there were "3 to 4" readings in every square meter. The team had been on site for "many weeks" and had found a hand grenade with tripwire attached, two PMR-2A fragmentation mines with tripwires (one attached to a beer bottle), a three grenade "booby trap", a PMA-3 blast mine, a 60mm rifle grenade and a Soviet grenade with fuse. In adjacent areas, four civilian casualties had been reported since the war.

The investigators felt that some details of the victim's personal life were relevant. They mentioned that he had separated from his wife who had taken his children abroad. He had a

girlfriend (the team cook) who may have been "flirting" with other men. His children visited "recently" and after they left the victim's character "changed considerably". He was reported to have suggested "bringing munitions to the site to "improve" the clearance figures of the team" and to have said "that an injury could give him some money".

Conclusion

The investigators concluded that the device had exploded in the victim's right hand while "held at an angle above and to the right hand side of his head". The victim must have been lying down at the time.

They decided that he "either found the grenade or 'imported'" it to the site. The evidence pointed towards the grenade having been brought to the site and deliberately detonated [although the investigators stop short of saying this – possibly because to do so would have invalidated insurance].

Recommendations

The investigators recognised the personal and professional pressures that deminers can suffer and recommended a "close watch" be kept for evidence of such stress and that sufferers be redeployed "until fit to return to hazardous operations".

Among other recommendations, they suggested liaison with the police over priority at traffic-lights for tunnels [which had delayed evacuation], that managers ensure that ambulance drivers do not drive at excessive speed, and that the ambulance should be "on site" while work is under way [the recommendation implies that it was not].

Victim Report

Victim number: 274	Name: Name removed
Age:	Gender: Male
Status: deminer	Fit for work: DECEASED
Compensation: not made available	Time to hospital: 35 minutes
Protection issued: Frag jacket Helmet Short visor	Protection used: Frag jacket, Helmet, Short visor

Summary of injuries:

INJURIES

severe Head

AMPUTATION/LOSS

Arm Below elbow

FATAL

COMMENT

Victim died after four days in a coma. See medical report.

Medical report

A brief medic's report stated that the victim was "pierced through the temple" and that to prevent suffocation he removed his "dental prosthesis". He bandaged the right arm below the elbow with sterile elastic bandage, and also put sterile bandages on the head wounds. On arrival at hospital the "doctor sent me to check the blood group of the victim". He helped move the victim for X-ray after which the victim was taken to intensive care.

One of the investigators reported [in person] having visited the victim in hospital and having been shown the X-ray where fragments inside the skull were visible. The doctor anticipated death in 3-5 days, and the victim died on the fourth day after the accident without regaining consciousness. The investigator suspected that the event was deliberate, and the extent of the injury unintended.

Analysis

The primary cause of this accident is listed as "*Other*" because it seems that it was not an unintended event. From the evidence in the report, it seems likely that the victim deliberately detonated the grenade with the intent of losing his hand and getting a compensation payment that would "solve" some of his problems. It seems likely that he was trying to shield himself behind the sandbag and turned his head away defensively - ironically exposing the unprotected part of his head and neck to the fragments that killed him.

His helmet was on, fastened and with the visor down. Had he been attempting suicide, it is likely that he would have removed his helmet and held the grenade close to his face.

Related papers

Other documents in the Accident file included a detailed map of the area, a sketch map of the site, photographs of the accident site and the victim's equipment, and statements from the personnel involved. These were not made available for copying.

Original Bol report

The original Bol report (edited for anonymity) is reproduced below.

Report of the Investigation into the Mine Incident in the Praca Area on 14th August 1998

Introduction

1 A mine incident occurred on the morning of 14th August in the village of Praca in an area that had been mined during the recent conflict. A [demining group] deminer was seriously injured while taking part of a team clearance operation being conducted in a field close to several houses that are to be utilised as part of the [demining group's parent organisation] repatriation programme. The deminer, [name excised] suffered a traumatic amputation of the right hand and wounds to the right side of the head.

2 The Board of Inquiry (B of I) was convened on the 15th August and the investigation were completed on 17th August 1998. The Board members are detailed in the Terms of Reference for the Board of Inquiry at Annex A.

3 The Board staff were met at the site by the [demining group] management and team members and every assistance was given to help the board to complete its task. Also present were the local police from Praca who also conducted an investigation. The board has agreed to give the Praca police team copies of the investigation report in order to assist them in their investigation.

The [demining group] Teams and Team Number Four

4 [The demining group] has six teams, two in the Republika Srpska and four in the Federation. The teams consist of 39 members, including interpreters, cooks and medics and

are totally self contained. The teams are under the control of the new Entity Mine Action Centres for operational and administrative aspects, but the selection of priority tasks are the sole responsibility of [demining group parent organisation]. The Federation teams were trained in Tuzla (including Team Number Four) and undertook training between March and April 1998. The particularly hazardous conditions of mine clearance operations are well known to Team Number Four who have extensive experience of demining from wartime mine and demolition's activities.

5 Team Four completed its training on the 15 April and was operationally tasked to undertake work, in the Praca area. They started work on two tasks, one to clear a road to a small spring and clearance of a large field close by where the accident occurred on the 14 August.

6 The Team was reduced to section strength recently as the task in this field did not require the full compliment of the team. The main contingent of Team Four were recently re-tasked to a site near Ilijas.

EMAC SOPs

7 The Entity MAC Standing Operating Procedures (SOPs), which are the rules and regulations utilised by the [demining group] teams, are the standard UN MAC (now BHMAC) SOPs. All members of the [demining group] teams have previously passed recognised demining qualification training on a basic demining training course organised and conducted by the then (UNMAC).

Sequence, Documentation and Procedures of Tasking

8 The tasks in this area were identified by the [demining group] staff and the Regional Officer of the EMAC. Limited information is available about the mined areas and mine and munitions types used in the area, but some sketches and records were obtained from the BHMAC Data Base. These sketches were available, and formed part of the standard tasking folder.

9 The final agreement to undertake work is authorised by the Demining Co-ordinator [name excised], who in discussion with the Federation MAC will agree extensions and alterations to the original tasking order. There is no information of mine or UXO contamination in the area of the field where the accident occurred, but local personnel had insisted that mine and munitions were believed to be there. Furthermore the field, which is at the edge of the village, has not been utilised and would form part of grazing and/or agricultural land for several houses due to be reconstructed in the near future. This field was therefore included as an operational task and given the ID Number of 1289.

Priority

10 The priority of this task was high due to the fact that spring water was required for the houses in the immediate area, and the field for grazing or sustenance farming for the present local personnel and for the imminent return of refugees.

Geography

11 Praca is to the east of Sarajevo, some 15 kilometres from the village of Pale. It is in the Federation area near the Inter Entity Boundary Line (IEBL). Praca is in a mountainous region set in a pleasant valley, which is small and flat with grazing and agricultural land in the valley and on the sides of the mountains. The roads, two run through the village, are tarmac single lanes (two way) from Pale and heading in a south easterly direction to Gorazde. The village has the river Praca running close too the road through the village. The task site is on the edge of the village next to the village football pitch with a road on one side and the river on the other. See attached map at Annex B.

Ground Conditions in the Praca Area

12 An evaluation of the ground conditions at the task site in Praca area was conducted by the board. The site is flat, grass covered, the soil is of poor quality and the vegetation sparse. The soil is extremely difficult to prod due to the hardness of the soil, and also consists of a large quantity of small stones, and has considerable metal contamination, which makes clearance by prodding and detectors slow and extremely difficult.

Equipment and Tools Used

13 During the investigation the standard methods of mine and munitions detection/location being used by the team in the Praca area were investigated. The following comments are made:

a Prodding Tests - Prodding tests were conducted in order to establish the ground conditions in the area and to determine the depth to which prodding activities might have been successful during previous clearance operations. The tests, which could not penetrate more than a 3 to 4 cm depth, confirmed that the prodder could not penetrate the ground to an adequate depth without excavation.

b Metal Detector Tests. – The Metal Detector used on the site is the MineLab F1A4. The site has considerable metal contamination and the deminers are on average required to investigate more than 3 to 4 metal soundings in every metre of area.

14 This site relies mainly on the metal detector and when metal items are found, they use the prodder and trowel to excavate the immediate area.

The Mine Threat in the Praca Area

15 The area around Praca was held by the Serbs until the Dayton Peace Accord when it was agreed that it formed part of the pocket of land from Sarajevo to Gorazde. It is believed that this land was mined as the Serb forces withdrew from the area but this has not been confirmed. Some records clearly indicate that minefield areas to the North contain or contained (they have yet to be surveyed) PMR-2A fragmentation mines.

16 The team has been on this site for many weeks and has to date found and destroyed the following mines and munitions:

a One Hand Grenade with an Instant Fuze attached to a tripwire

b One PMR –2A Fragmentational Mine with standard tripwire attachment

c One PMR 2A Fragmentational Mine attached to a beer bottle by tripwire

d Three grenades in a glass bottle rigged as a Booby Trap

e One PMA 3 Blast Mine partially buried

f One rifle grenade 60 mm

g One USSR Grenade complete with a fuze from the same type of grenade close by

17 There are many other sites, which are believed to be mines in the Praca area.

Previous Work in the Area

18 The immediate area has not had demining teams undertake clearance tasks previously, with the one exception of the village football pitch, which is reported to have been cleared by an Italian IFOR contingent.

Previous Accidents in the Area

19 There are several sites adjacent to this area that have had four reported mine related incidents to local personnel since the war.

Events Leading to the Accident

20 There are no known special problems on the site that warrant recording but the personal situation of [the Victim] requires considerable attention. From the statements several important aspects about his personal life and recent comments are the cause of some concern and certainly reflect on his possible mental state. The main points are:

a He was separated, (possibly divorced) around five years ago and his ex-wife and their two children moved to Sweden.

b He has been living with a female (who also acts as the team cook), but relationships have been rather tense recently with frequent arguments. It is reported that she has flirted with at least two other men in the last few weeks.

c The two children visited recently, and have since returned to Sweden. Since their return his character has changed considerably. [The victim] has, since this time been argumentative with his fellow team members and made several unusual statements including:

- i) Bringing munitions on site to improve the munitions performance
- ii) Claiming that an injury could give him some money

The Accident

21 An explosion occurred at about 09:00 hours, at the start of the central lane, in which [the victim] working. [The victim] was seriously injured.

22 During the clearance operations the team had a medical orderly on site with full equipment. A full casualty procedure was immediately activated and Basic Life Support given. The casualty was carried out of the mined area to the medic who was waiting on the roadside. First aid was administered and the casualty was rapidly evacuated to the local hospital. The CASEVAC was conducted well and took less than 35 minutes from the incident to arrival at the hospital in Sarajevo.

Site Investigation

23 Statements were taken from all involved personnel, the statements confirmed that normal demining activities were being conducted. The entrance to the site was clearly marked and had been 'closed off' in accordance with Technical Guidelines in preparation for a site investigation. The site was very clearly marked and in complete accordance with SOPs. It was easy to understand the site clearance procedures, work in progress, admin areas etc, due to good and clear marking.

24 An area in the central portion of the field were being cleared, and three new 'cut lanes' had started that morning. The three deminers were 25 metres apart and being supervised by one section leader from the 'visitors lane' some 25 metres from the intermediate lane. This is in accordance with standard procedures and on this site was conducted entirely correctly.

25 The central lane of the three was being undertaken by [the victim] who was using the standard equipment of the [demining group] teams, consisting of a Mine Detector, prodder, shears, trowels etc. The area has very sparse vegetation and any mine or munitions laid on the surface or partially buried would be easily seen.

26 The accident area was checked by deminers using prodders and mine detectors before the team conducted the site investigation. The incident occurred some 1.0 metre from the edge of the intermediate lane. See Annex C for the accident site sketch

27 The accident site consisted of one metre by approximately one metre which was the area from the intermediate lane, where work started that morning to the extent of work completed by [the victim] before the accident occurred. This area, see attached photographs at Annex clearly show three small holes where investigation for metal readings had been undertaken.

28 The amount of metal in the Hand Grenade (see paragraph) [space in original] would be very easily identified by the use of a Metal Detector. If an item of ordnance had been found the procedures are clearly detailed in the SOPs that the deminer is to stop work and inform the Team or Section Leader. On no account are the munitions to be moved.

29 None of the holes indicate that a mine or munitions has been removed which would be clearly evident by the irregular wall on the far side of the excavation hole. It is assumed, but cannot be confirmed that the (Dynamo) Hand Grenade was not buried, based on this evidence.

Investigation of the Blast - Ground, Jacket and Helmet

30 A close investigation of the ground and the sandbag used by [the victim] to contain soil removed for excavation holes, and positioned in the immediate area of his body, revealed that the sandbag was close to the blast as it was considerably damaged by the blast. The bag also contained at the top a large stone the size of a clenched fist.

31 The helmet had several fragments or fragment indentations to the right side and fragment scuff marks on the right side. The direction and angle of the fragments could therefore be clearly identified. The helmet also has soil blast marks on the right side that are identical to the soil colour found in the sandbag, and there is a blackish mark beside the soil marks that indicate possible explosive burn. The visor that is attached to the helmet also has extensive fragments and fragment indentations on the right side in the immediate area of those found in the helmet. See attached photographs at Annex .

32 The Flak or protection jacket has fragment penetration of the outer layer of the jacket and several fragments are contained inside the jacket held by the protective layers. These fragments, holes and scuff marks are on the right side below the fragments of the helmet and visor and on the top of the right shoulder. There are no marks on the back, front or below the shoulder on the jacket at all, clearly indicating the area of the blast and fragmentation direction.

Identification of the Munition

33 The Sarajevo Bomb Squad has unofficially agreed with the identification of the board. This identification is based on several fragments retrieved from the accident site that are very similar to those of the Dinama type hand grenade. These grenades were made in their thousands during the war period. The normal method of activation of this grenade is to remove the safety cap/cover to expose the striker mechanism at the top of the grenade. The action of striking the grenade striker onto a hard object, drives the striker onto the detonator and delay fuze, which burns for about 4.5 seconds before the base detonator explodes, initiating the main charge. On detonation the explosive blast drives a multitude of metal fragments omni-directional and at high velocity.

Medical Assessment of [the victim]

34 An interview was conducted with [medical doctor, name excised] to ascertain the condition and the extent of the wounds. The Doctor confirmed that [the victim] had lost his right hand ,wrist and lower portion of the arm. In addition he had two fragments that had entered the right side of the head, one was located the central left side of the skull the other on the central spine location below the skull. The point of entry was from the right side above and forward of the right ear the other entry point was below the right ear.

Assessment of the Explosion based on the evidence.

35 An assessment of the physical damage to [the victim's] hand, arm and head, and the protective equipment, including the sandbag on the site, and the munition type, indicate the position of the person when the accident occurred. It is evident, based on the blast and fragments, and the damage to the hand, lower arm and head that the explosion occurred while the grenade was in [the victim]'s right hand. That his hand was close to the head and held at an angle above and to the right hand side of the head. Based on the soil that was thrown at great speed, and covers the right side of the helmet and the blast damage to the sandbag the explosion also occurred in the immediate area of the sandbag.

36 As there is no blast or fragment damage to the back, front, side or lower parts of the body this clearly indicates that the blast was contained in the immediate area of the head and shoulder. Due to this munition being an Omni-Directional type the position of the grenade was certainly held in a position that shielded the rest of [the victim]'s body, and that could only have been achieved if he was in the lying position.

Sequence of Events on the 14 August 1998

37 Account of activities prior to, during and after the accident.

07:50 Roll call was held by [name excised], the Team Leader (TL) at the Praca field base. Half of the Team were carrying out clearance operations in Ilijas, therefore only half of the Team personnel were present. The TL left on completion of the roll call to go to Ilijas leaving [name excised] the Survey Section Leader (SSL) in charge. All was correct and there was nothing unusual on this morning.

08:15 The Deminers arrived at the Command Post (CP) area in the car park adjacent to the minefield being cleared 1 kilometre from the field base. Daily checks were carried out on equipment and the section leaders briefed their sections on the days work plan.

[Name excised] was the section Leader in charge of [the victim]. Her plan for that morning was to start three parallel lanes 25 meters apart.

[Three named deminers] would be in the rest area waiting to be first relief.

[Name excised] (SSL) checked radio communications with the Sarajevo Regional Office and informed the SL's they could proceed with demining.

[Name excised] (SL) went through final checks with her deminers and ordered them into the field. She then started to inspect the site.

08:30 The Deminers started work in their respective clearance lanes. [The Section Leader] walked along the visitors lane 25 meters back from the deminers at their base line checking the pickets and marking system.

08:30 – 08:50 [The victim], as observed by the Deminers working in the lanes on either side of him, was seen to be working normally with a MineLab detector and prodder. Neither of the deminers took much notice of what he was doing because nothing about his actions seemed in any way different from usual.

The medic and ambulance would have normally been in the CP 100 meters from the clearance work but at this point they were in the field base 1 kilometre away refilling water canteens

08:55 An explosion was heard and smoke was seen in lane 2. [The Section Leader] was at the road approximately 50 meters away from lane 2. She immediately initiated a CASEVAC over the VHF radio shouted to the other deminers and ran through the safe lanes to lane 2. They thought at first it was a training exercise. She also verbally called [name excised] from the rest area to assist.

All work stopped and the deminers went to the rest area. The medic and ambulance driver responded immediately and drove to a point as close to lane 2 as possible without leaving the tarmac road. The trip took less than five minutes and the ambulance stopped approximately 100 meters from lane 2.

[The Section Leader] and [Name excised] arrived at the casualty seconds after the explosion to find [the victim] laying face down, half in his clearance lane with his legs in the base lane. His left arm was under his body and his right doubled under his right shoulder.

The base stick was broken in two with half behind the casualty and the other half under him. There was a work glove on his left hand. His tools and detector were behind him still in the base lane. There was a part filled, part destroyed sandbag under him, half was in un-cleared land.

Together they pulled him back into the base lane and turned him over.

His right hand was gone from just above his wrist. His visor was smoked and full of blood.

They removed his helmet and saw there was a bleeding wound above his right ear and what looked like a superficial wound on the right side of his neck. The casualty was unconscious and his breathing was ragged and erratic.

[Name excised] was told to go and get the stretcher. He ran to the ambulance and returned with the stretcher and [another deminer]. The casualty was quickly laid on the stretcher and carried to the medic at the ambulance. The medic, [name excised], took the casualty's flak jacket off. He checked his airways and removed a set of dentures, he also pulled the casualty's tongue out to give a clear air passage. The casualty on the stretcher was loaded into the back of the ambulance and left for the hospital with the medic and four deminers to assist.

09:00 – 09:35 The ambulance hit and killed a sheep between the site and the tunnel. The ambulance was delayed at the tunnel into Pale for five minutes waiting for a green light but the journey to Kosevo Hospital was completed in 35 minutes which is 10 minutes less than usual.

The casualty was unconscious throughout the journey.

09:15 [Name excised] (SSL) checked with the other Deminers that no one else was injured and then ordered the Demining site closed and sealed.

09:30 [Name excised] (SSL) informed the local police of the accident.

09:15-09:45 The Deminers removed all their equipment to the field base, Deminers were detailed as guards to ensure no one entered the site. The site was sealed and guarded until the investigation team arrived the next day.

10:00 [Name excised] the Regional Officer (RO) arrived and inspected the accident area with the SSL. They approached to within a few meters of the explosion site but did not change any thing.

The RO took personal charge of the helmet, flak jacket, tools and detector. He interviewed each of the Deminers separately and took personal statements from them. He remained on site until the investigation team arrived the next day.

12:00 Approximately IPTF arrived on site and carried out a brief investigation.

Assessment of the Statements made by the Primary Witnesses

38 The statements clearly indicate that [the victim] was under tremendous pressure from his personal life, which seems to have changed his normally placid character to being aggressive and argumentative and making statements that were totally unacceptable to other team members.

39 The Section Leader, an old friend, had spoken to him on two separate occasions to try and get him to understand that he was being irrational. Other team members had also spoken to him and the situation was certainly reaching a critical period.

Summary

39 This area of land is extremely difficult to demine. Previous accidents, lack of detailed records and information and a site on which many items of munitions of an improvised type have been found make this site one to address with extreme caution. Prodder and Detector performance in this area are poor, due to the ground conditions, but this has nothing to do with the events of this accident.

40 The accident occurred due to actions taken by [the victim] who either found the grenade buried or 'imported' the item to the site. Evidence of the excavation holes indicates that it is unlikely that the grenade was buried but this cannot be proved. Regardless of whether [the victim] found or imported the grenade he had at this point broken a number of critical safety rules. The body of [the victim] was certainly in the prone position when the grenade activated and this is not a position that is common or taught. Driving the striker onto a hard object activates this grenade, and the large stone, which is an unusual object on the main part of this site, was in the top of the sandbag.

41 There are two distinct options.

a Option One. If the grenade was buried, the lack of the normal reporting procedures when it was found, the removal, the holding of the grenade above the head while in the prone position and the self activation (due to unknown reasons of the grenade) make this a probable, if highly unlikely possibility. If this option is accepting the reason for the removal, holding the grenade, being in the lying the position and for the grenade to 'self' activate are difficult, if not impossible to explain.

b Option Two. The lack of evidence indicating the grenade was buried, not reporting the find of a munition, the availability of a 'striking' stone and lying in the prone position lead one to surmise that this could be the result of importing the grenade to the site, and the deliberate activation of the grenade.

Conclusion

The management, site organisation and conduct of operations were very good and the board made only complementary comments. In respect of the accident and in the light of the evidence, it is extremely difficult for the board not to come to the conclusion, that this accident was deliberately conceived and carried out.

Recommendations

There are certainly tremendous physiological and mental pressures on many people after the recent events, but none of the board is trained to assess these particular aspects. However demining and EOD has also tremendous pressures, and management must ensure that a close watch is maintained on all personnel involved in mine action. This is to ensure that physiological and mental pressures are identified and members allowed to rest, take leave or be employed in less stress-related tasks until being fit to return to hazardous operations.

Signed by the Board Members

Signed by the two members of the Investigation Board. The Observer signed merely to state that he was in attendance and not that he agreed or disagreed with the results of the inquiry or its conclusions.

1	Technical Advisor to the Demining Commission	16 August 1998
2	[Demining group] Programme Coordinator	16 August 1998
3	[Demining group] acting as an Observer	16 August 1998

Distribution

This document is on limited distribution, it should not be photocopied. The following departments/personnel only are to receive a copy

Federation Mine Action Centre
BH Mine Action Centre
Praca Police Department
[Demining group]

Additional copies should be sought from [the demining group].