

11-9-2000

DDASaccident340

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DDAS Accident Report

Accident details

Report date: 19/05/2006	Accident number: 340
Accident time: 10:15	Accident Date: 09/11/2000
Where it occurred: Nr. Zavala Village, Ravno Municipality	Country: Bosnia Herzegovina
Primary cause: Field control inadequacy (?)	Secondary cause: Inadequate equipment (?)
Class: Vegetation removal accident	Date of main report: 22/11/2000
ID original source: AS/AS/PS/SD	Name of source: BiH MAC
Organisation: Name removed	
Mine/device: PROM-1 AP Bfrag	Ground condition: agricultural (abandoned) bushes/scrub grass/grazing area metal fragments rocks/stones trees
Date record created: 21/02/2004	Date last modified: 21/02/2004
No of victims: 1	No of documents: 1

Map details

Longitude:	Latitude:
Alt. coord. system: YH 4350 4838	Coordinates fixed by:
Map east:	Map north:
Map scale:	Map series:
Map edition: UTM	Map sheet:
Map name: 1: 25 000	

Accident Notes

protective equipment not worn (?)
vegetation clearance problem (?)
inadequate equipment (?)

Accident report

The following is the MAC's Accident report, edited for anonymity.

INTRODUCTION

Demining accident occurred on November 11th 2000 at 10.15 hrs, in the area of village Zavala, Ravno municipality. The demining site was cleared by [Demining organisation].

The Demining organisation involved has been conducting demining in Croatia since 1996, while it conducts the same within Bosnia and Herzegovina from May 4th, 1999, when the first accreditation was acquired.

The clearance in the area of village Zavala commenced October 10th 2000 with three demining teams. Two tasks within this area were completed by the time accident occurred.

Based on the accident report, BH MAC Director convened the Board of Inquiry on November 11th, at 14.00 hrs. Telephone report from RO MAC Mostar was provided at 12.00 hrs while the Initial report was sent to BH MAC at 14.45 hrs (Annex A).

The members of the Board of Inquiry were as follows:

Chairman – BH MAC Coordination Department

Member – BH MAC Coordination Department

Member - F MAC (Royal Engineers)

Member – RO Mostar F MAC

Board of Inquiry left Sarajevo with its two members at 05.30 hrs and met the rest of the members at RO MAC Mostar at 08.00 hrs. At about 08.30, the BoI left for Stolac where the base of the three demining teams is located (Villa Raguza). The Board of Inquiry reached the seat of the teams at about 09.30 hrs. The representatives of [the Demining group] and [QA] monitor from [the] monitoring organisation met them there.

[The Demining group]'s Operation manager was appointed as the assistant to the Board of Inquiry, representing the organisation. After the Board of Inquiry was presented with the task, the documentation and the written reports of the participants in demining and the witnesses of the accident, the members went to the site. They were taken to the site by the team who had the accident, led by the site team leader, the man who was in charge for Quality Assurance on the site and the monitor. The other two teams not included in the accident as well as the part of the team who had the accident were left home for the purpose of attending the funeral of late deminer [Victim No.1] in Tuzla region. According to the schedule for that day, the working hours were shortened in order to allow deminers to go for elections scheduled for November 11th. Most of deminers were from the region of Orasje and Tuzla.

The group arrived at the site's control point at 12.15 hrs, while the investigation was finished by 15.00 hrs.

[The Board of Inquiry had finished their report on 22nd of November, since the documentation from the investigation from the site was provided no sooner than that.]

SEQUENCE, DOCUMENTATION AND THE PROCEDURES OF TASKING

Ravno municipality required the clearance of the location mentioned in order to enable the return of about 200 former inhabitants of Zavala village (Croatian and Serbian nationality, which means enabling the reconstruction of facilities destroyed and the possible future use of the agricultural land. The inhabitants of this area were mostly living on agriculture. The village itself was caught in the war activities, which led to the absolute demolition of houses. The fact that the minefields laid in the war were known, none of the former inhabitants actually returned. The location of the village to be demined was split to four separate tasks, while the one in question is Zavala-Polje 1 with ID 10467.

There were three minefields that (according to records) either partially or fully covered the task, the entire area of 18.770m² was set for clearance.

(Annex C, cadastral map). According to the documentation available, HVO had removed two minefields in compliance with military standards and under the supervision of SFOR.

Particular minefield with 16 PROM mines in it (as for the record 643, given in Annex C) has not been cleared to the military standard and it is partially within the task issued.

GEOGRAPHY

About 50% of the eastern part of the task is a valley that is actually a peripheral part of Ravno Polje location. If looked to South and Southwest, this part is mildly climbing. There is asphalt road leading towards the valley in the underneath. Western and N/W part of the task is steeper and is ending in the crack within the rocks. At this point there is an old and narrow railroad track that used to connect Capljina and Trebinje.

The flat part of the field is suitable for both agriculture and growing grass. Due to long period of its being non-inhabited, grass and thin trees grown over it. There is about 50% of the task where the mild meadow turns to steep rocky area where there is lot less grass and much more thick bushes of even 2-3 metres height. There is a small track leading from the west side of the task, from the railroad track and between the rocky areas. Due to some soil layers on it, this track is grown in grass between the bushes. Due to drought usual during the year, the thick bushes and grass were dry, while new grass grew after a few autumn rains.



[The picture above shows the accident site.]

During the conduct of works, the weather was cloudy. The temperature outside varied from 15 – 17⁰ C. The conditions for work were suitable.

The photographs of the site, showing the area and the vegetation on the site, which is being demined, are attached in Annex G. [The Annex was not made available, but some pictures were.]

TASKING PRIORITY

The priority to this task was set based on the planned return of the former inhabitants (Croats and Serbs) to the village of Zavala. It also encompasses the reconstruction of houses completely devastated during the war, which would provide conditions for the safe use of the meadow in order to use it for agricultural and livestock breeding purposes, since that would enable the existence of the returnees. Apart from stated above, the area is known for its tourist attractions, such as old XIII century monastery and the Vjetrenice cave.

Federation MAC accepted the request for clearance of Zavale village, which was set by Ravno municipality and considered it a category 1 priority. It became a part of the demining plan for the year of 2000.

The acceptance of the Ravno municipality request to treat this task as a priority is a reasonable solution for the known minefields in both the very village and its vicinity, which

were the main reasons for inhabitants not to return. There are three partially encompassed minefields in the task while the third one is completely within the task (Annex C).

TASK SITE LAYOUT AND MARKING

Task site layout is conducted in compliance to SOP and BH Standard. Areas within the safe areas are located at the flat part above the field where the railroad track is. There is also a place where the World War II monument was placed. This area is marked with 1.2 – 1.5 high white tipped pickets attached to each other with the tape under the painted part. The control point is also located in this area, with all the three teams, parking lot for vehicles, the area for the medic and his vehicle, area for equipment and detector testing, as well as the rest area. Starting from the safe area and towards the western part of the part, there is the asphalt part of the track following the old railroad track. It leads into the flat area of the task. This part of the road, which is following the railroad track, is marked as the access lane. It is about 100m in distance from the datum line or about 140 m from the location of the accident. There is a metal collecting pit at one part of the access lane, while there is a larger area on the cleared part of the task. This area contains metal debris and it is marked. The latrine is marked with an access lane from the safe area towards the closest devastated house. Daily storage of explosives for demolition is not documented while the site manager, when necessary manages its purchase. Mines or UXO found are remotely pulled from the safe distance, then rendered-safe and if necessary disarmed to be carried to the demolition pit that is located at one of the safe parts of the area. After a certain period of time (weekly), mines and UXO from all four tasks are being destroyed under the supervision of the team leader. As a border between the clear and mined area at the rest of the task site, stones are used to attach the mine tape to the ground, since the area is mostly rocky. Stones are placed at maximum distance of 2 metres from each other, while the 0.5 high red tipped pickets are used where possible. Base stick is used in the working lane with a 25 red-white rope wrapped around the white sides of the base stick. Mine that is found is properly marked with 0.5 yellow tipped pickets.

The task site plan is attached in Annex F, while the parts of the site can be seen at photographs attached as Annex G. [Not made available.]

SUPERVISION AND DISCIPLINE ON THE SITE

[Name excised] is the leader of the demining team and the immediate task supervisor. He attended the humanitarian demining course in 1996 in [another NGO] organisation and is considered to have appropriate experience needed for a team leader.

The senior site supervisor conducted the next level of supervision. Apart from the team leader, [name excised 2] was spending most of the time at the task, conducting the role of the operational manager for Bosnia and Herzegovina for the four tasks issued at the tender for Zavala village. He was also conducting the role of a senior supervisor.

QUALITY ASSURANCE

[Name excised 3] was conducting the Internal Quality Control, since he is the appointed person for Quality Assurance in demining. He was on the site all the time, conducting the QC checks within three demining teams that were engaged at demining tasks in Zavala village. He was in charge of the weekly QC report that is sent to the operational manager for BiH. He conducts daily QC check within the teams. If any faults noticed, he notifies the team leaders and the site manager, in order for these faults to be removed.

Regarding the Fed MAC structure, the entire site with all four tasks, including the one where the accident occurred, were visited by RO MAC Mostar inspector. The remarks given that were related to the quality of work and the safety during these inspections, were mostly the height of vegetation, the use of the helmet with visor, which had been accepted by the immediate and senior supervisor as well as corrected. Such mistakes were not spotted on this site again.

The external control on behalf of the contractor for this site (ITF) was conducted by a monitor from the [commercial] monitoring company. The monitor is at the site all the time and oversees three [Demining group] teams cover controlling the conduct of all four tasks. To the day of the accident, two tasks were completed, while the third one was supposed to be completed on the day when the accident occurred, i.e. only the task where the accident occurred remained for clearance.

COMMUNICATIONS

There are two portable MOTOROLA VHF devices within a demining team, used for communication with the control point and the team leader if he is on the operational part of the task site. The same type of communication is maintained with the site manager and operational manager, as well as between the teams. There is a MOTOROLA VHS GP-300 device in the site manager's vehicle that was used for the maintenance of communication with the police station Ravno, while the police station forwarded the communication to the hospital in Dubrovnik.

There is a VHF device within the medic vehicle for maintaining the communication. The maintenance of this communication is for the medical vehicle driver, who is supposed to be on the control point with his vehicle.

The operational manager for BiH is connected with the management of [the Demining group] by a mobile connection, while he is in either direct or indirect communications with the hospital in Dubrovnik (indirectly – using the police).

The existing communication is in compliance with the requests and existing possibilities of maintaining the communication in this part of BiH, as well as the fact that the operational manager was not in Brcko office but with the teams on the task all the time. This means he was immediately connected with the teams by VHF communications.

The operational manager for BiH notified RO MAC about the accident, and the Initial report was sent immediately afterwards. Along with notification about the accident to RO MAC Mostar, the management of [the Demining group] in Zagreb was notified as well.

MEDICAL SUPPORT (CASUALTIES INCLUDED)

A medic conducted medical support on the site, with all the necessary medical equipment for the emergency first aid and the designated medical vehicle.

The constant medical support was sufficient in relation to BH Standard requests.

In the moment of the explosion, the medic with his equipment was located in the safe area, about 140 metres from the location of the accident.

Medic conducted to provide the emergency first aid at the very spot of the accident, right after the deminer No 2 checked and confirmed that the area around the [Victim] was safe. When approached, the injured deminer was showing no signs of life. That is why medic declared instant death due to the injuries of vital parts (head, the entire chests, extremities from lower legs up) since the mine exploded in his immediate vicinity. Regarding protective equipment, the deceased deminer had his protective jacket on.

At the site of the accident [the Victim] was killed, born May 13th 1966 from village Mramor near Tuzla. He had finished the basic humanitarian demining course in demining organisation [other Demining group] on March 14th 1997, where he worked until contracted for this work. He was considered to have the needed experience in demining.

After the first emergency aid was provided and the death was declared, the body of the deceased has not been moved until the police investigation members and the judge came to the site. The police report is attached in Annex I. [Not made available.]

There was no other injured during the explosion of the mine since they were at the safe distance. Deminer No 2 was about 40 metres distant from the deceased, but the configuration of the ground enabled him to partially observe the work of [the Victim] in his working lane.

Deminer No 2 could not be seen in direction of looking in the moment of the explosion. The activation of the mine at that place which was sheltered regarding the position of deminer No 2 actually prevented the shrapnel to injure the second deminer, as well as 40 metres distance. The location of deminer No 2 is shown on photograph given in Annex G. [Not made available.]

The last deminers insurance has been made for the period of 4th until 15th of November and it is larger than a minimum required in BH Standard. Demining insurance copy with the list of deminers is given in Annex J.

PERSONNEL INVOLVED AND TEAMS IDs

The following demining team was involved in demining the task:

team leader,
deminer / deputy team leader
deminer
deminer
deminer
deminer (absent due to illness from November 3rd 2000)
deminer
deminer
medic
medic vehicle driver

The written statements of the deminers on the site are given in Annex D. [Not made available.]

EQUIPMENT AND TOOLS

Equipment and tools used by the demining team in their working lanes (according to their statements and according to what is found on the site) was: VALON metal detector 1620 (serial No 4673), prodders, spades, shears, base sticks, helmet with a visor and the protective jacket.



[The picture above shows the long-handled shears in use. Their long handles invite the user to cut beyond the area checked.]

The status of protective equipment is given on photograph in Annex G. [Not made available.]

According to the documentation provided and the statement given by the team leader, the detector check was conducted prior to commencement of works and under his supervision. The detector check area was in the vicinity of the storage area and there was an additional one within the area of the task.

The testing was conducted on a PMA-3 fuse, prior to commencement, every time the detector is turned off and after every 10 minutes of work.

The check of the area was conducted. Based on the statements of the team leader and the site manager, it has been additionally stated that it was possible to use the detector up to 80% within the field (the flat area of the task). The possibility of the use of the detector on the

area that is a slope climbing up and covered with bushes was diminished to about 50%, mostly due to shrapnel from artillery ammunition during the war.

The metal detector was tracing the PMA-3 fuse at the depth at 12 cm.

The cleared area is marked with the mine tape, which is attached with stones at the 2 metres distances. Where possible, 0.5 metres red tipped pickets were flushed into the ground.

Working lane has been conducted using the base stick and red and white rope that has been unrolled every time the base stick is moved. The length of the working lane at the very location of the accident is about 4 metres comparing to the previous width from the rocks that climb vertically from the track towards the place of the accident.

The activation of the mine during clearance in front of the base stick is a proof that the work in the working lane was conducted with breaching of the procedure, which resulted in activated the mine while removing vegetation (bushes and grass). Regarding the area that has been cleared on the stated day, the vegetation was cut at a prescribed height of fewer than 5 cm, which can be seen on the photographs in Annex G. [Not made available.]

DETAILS OF THE MINE INVOLVED

The explosive device that resulted in the accident was a PROM-1 mine. Its plate was found in the crater from which the mine bounced, at the depth of 16 cm from the ground level, at the except place where the vegetation cutting in from of the base stick stopped, slightly to the left of the direction of the working lane that led towards North. Mine was buried into the ground by a rock. It was buried in soil that turns into the track that leads into the minefield. The left side of the mine's body and its plate was actually leaning on the stone surface. This way the mine was completely buried into the soil layer above the rock, while the fuse with its entire height was masked within the grown bush of thick grass at about 8-10 cm above the ground level. The bushes were leaning over the tops of the leaves of grass that was growing to the left of the rock, which can be easily seen by the look of the bushes that had been damaged by the explosion (photographs shown in Annex G).

Another plate of a mine was found at about 25 metres before, which was probably activated by wild animals.

Mine was laid ahead of the track that is leading into the field and the road that is leading downwards, to the right, and then turns towards the minefield. As for the minefield record, this was the second PROM-1 mine in the row that is laid to the direction of North (record No 643 given in Annex C). This mine was attached with two tripwires. The tripwire to the right was attached and crossing the asphalt road into the field, while left one was crossing the old railroad track.

According to the sketch, first PROM-1 mine in the row is surface laid, to the left from the old railroad track. This is why it is not encompassed by this task. According to the sketch, it was tripwired by the end of the railroad track fence and was activated either by the wild animals or HVO deminers who entered this way under the SFOR supervision. They have lifted an entire AT minefield under their supervision in the year of 1996 (Record 445 in Annex C). This AT field was on the road into the field, as well as the part of the second minefield, which is entirely encompassed within the second task (ID 10746 – right side of the field). As stated, this part of the mixed minefield with both AT and AP mines (record No 301 in Annex C) was cleared by the second [same Demining group] demining team.

Apart from the PROM-1 plate that was found, a defused TMA-3 mine was found on the surface and a UXO (82mm mortar grenade) within the flat area of the task.

The place where the plate is found along with its powder tube is shown on photographs in Annex C. [Not made available.]

EVIDENCE OF REMINING

There is no proof that remaining was conducted. The location where the mine was activated is vividly shown on the mining sketch, regardless of the fact that the mining was conducted during the night (Record 643).

CLOTHES AND PERSONAL PROTECTIVE EQUIPMENT

The deceased deminer wore his protective jacket in the moment he was killed, while he took off his helmet with visor in the cleared area in front of the working lane.

This can be proved by the photographs made by police, the next day immediately after the accident (Annex G). [Not made available.]

DETAILED ACCOUNT OF ACTIVITIES ON THE DAY OF THE ACCIDENT

Based on the activities indicated in the daily report until the moment of the accident, as well as on written statements and talks conducted, the detailed account of activities was as follows:

07.30 hrs, teams left their base in Stolac (Villa Raguza) towards the Zavala village.

08.10 hrs, teams (three), site manager and the monitor came to the site.

08.10 hrs to 08.30 hrs, preparation of equipment; team leaders are accepting the tasks from the site manager; teams are informed and task issued; detector check was conducted.

08.30 hrs the works started. According to tasks issued from the site manager, team leader is engaging one two-men team [including the Victim] for work in the working lane on the higher part at the right side of the task. When he sent them to this task, he urged them several times to be additionally careful for the expected PROM mines at this part of the task. Along with the rest of the four deminers, he organised the collecting of the cut vegetation on the cleared area, which was supposed to be stacked and burnt. Collecting and burning the vegetation cut on the right side of the task (ID 10746) which was already completed, but bordering with the task where the accident happened, was conducted by the two [Demining group] teams that were engaged on three remaining tasks in Zavala village, that were practically completed during this day.

09.00-09.10 hrs - rest.

09.10 hrs – continuation of works in the working lane, shifting deminers, collecting and burning the vegetation in the field.

09.40-09.50 hrs - rest.

09.50 hrs – continuation of works, shifting deminers. [the Victim] in on the shift in the working lane.

10.15 hrs – accident happened. The medic tried to provide emergency first aid but stated instant death. Immediately after this, the information about the accident was sent to police station in Ravno, RO MAC Mostar, and management of [the Demining group]. Initial report was sent to BH MAC.

In the period from 13.00-14.00 hrs the local police along with the representatives of the IPTF conducted their investigation. The deceased was transported from the site about 15.30 hrs, with the memorial service vehicle from Neum.

SUMMARY

During the war, Popovo Polje was in the area of confrontation lines between HVO and VRS. In the Zavala area, HVO had their positions, so that the flat areas of Popovo Polje as well as all the roads leading into the village were mined due to prevention in case VRS army should have attacked.

There were artillery attacks during the war, especially targeting the places on heights, since the vegetation and the rocks in these areas could easily be used as a cover. For the reasons stated, the area is more metal contaminated than the flat part of the field, which puts the limit on the use of the metal detector. As for the flat area, the prodder could have been used with success, while in climbing areas with stones its use was diminished as well. The height where the accident happened is a rocky surface covered with layers of soil of a different depth. This passable part of the area enables the use of the road into the field, though this road has not been used at this moment and is grown in grass, while bushes of different thickness and height grow between the rocky plates. The height of the bushes varies from 2-3 metres. The grass mostly grew in bushes that went dry during the summer, but due to the autumn rain, the grass grew through the bushes up to 10 cm.

Such bushy vegetation is very suitable to absolutely hide the PROM-1 fuse. A layer of soil and stones by the road is suitable for a PROM mine to be buried and completely masked with the bushes. According to the sketch of the mines laid, these are laid near rock and attached on tripwires that go over the small track leading into the field, towards the railroad track and towards the road to the field.

Garden shears were used for cutting vegetation in the working lane in front of the base stick (bushes and grass that grew very thick near the track leading to the field, and new grass is visible through the rests of the dried bushes). Based on the status at the site of the accident, there are two possibilities of making a mistake in the basic working procedure, and those are:

- Hand check of area grown in thick bushes and grass might be left out during the removal of vegetation in front of the base stick to the height of 5cm, in order to proceed working with the detector and the prodder, in order to trace possible surface laid mines, protruding fuses, UXOs etc. This led to the misuse of the garden shears that actually cut the PROM fuse and activate the mine, or
- Shears might have caught a larger part of the area in front of the base stick, than one that it is actually checked visually and with hands. This resulted in uncontrolled cut of the PROM fuse, bouncing and activating of the mine in front of the deminer, about 1 metre distance from him and about 70-80- cm above the ground level.

The position of the deceased deminer was in crouching position in the moment of cutting the vegetation. This can be concluded according from the type of injuries of the deceased and the statement of deminer No 2. The blown fist and damages on the shears used, with the damage angle that matches the height of explosion (70-80cm above the ground level), this all proves that the mine was activated by uncontrolled use of the shears for cutting vegetation.

Photographs of the injuries and the damages of the cutting tools (shears) are shown in Annex G. [Not made available].

During the investigation, no traces of tripwire were found on the spot, which proves that there were many fires at this area that made the tripwire to burn. If the tripwire were reliable in function, it would be probably caught and mines activated by now by wild pigs that are very frequent in this area.

ADDITIONAL INFORMATION

No mine accidents were documented at Zavala area. According to the evidence of mining of the wider area, there are 13 mine fields documented in BH MAC database, out of which 7 minefield were lifted in 1966 by the HVO, in accordance to military standards, and under the SFOR supervision.

CONCLUSIONS

As for demining accident that happened November 11th 2000 within the demining team that conducted the task of Zavala Polje 1, ID 10467, the reason for the mention is that the procedures of work in the working lane have not been conducted to their full extent, either by [Demining group] SOP or the BH Standard. Based on the thorough look of the status, written

statements, conversation and documented photographs, the Board of Inquiry is able to state the following:

The procedure of work in the working lanes that implies the visual and hand check of the prodded area up to 0.5 metres in front of the base stick was not conducted fully. This procedure is used for locating surface laid mines, protruding fuses, UXOs and similar. As a consequence, the fuse was cut unintentionally so the mine bounced and activated.

The tools for controlled removal of vegetation were not suitable (instead of smaller shears for cutting grass, garden shears were used for both bushes and grass. The fact is that when cutting bushes we can easily see the level of the ground while conducting removal.

Minimum protective equipment was not worn as required, since the deceased deminer did not wear his helmet with a visor, though it is a belonging part of the stated [Demining group] site equipment. An absolutely torn black cotton cap worn by deminer was found by the base stick

RECOMMENDATIONS

Based on all stated above and in order to prevent future accidents, the Board of Inquiry wishes to state the following recommendations:

1. Depending on the local conditions (vegetation, type of soil etc) a deminer in his lane should use the most appropriate procedure that will enable him locate the mine, without any threat to his health and life. The immediate role in setting the most adequate procedures in the lane is for the site supervisor.
2. The vegetation cutting tools used in the working lane in front of the base stick should be adapted to the vegetation, cutting with control, in order to locate even a surface laid mine, protruding fuse or an UXO.
3. Take all the possible measures through the chain of supervision in order to make deminers use the entire set of prescribed personal protective equipment, as stated in organisation SOP and the BH Standard.
4. Conduct minimum of one-day training about the breach of procedures that led to this accident. Federal MAC is to be notified about the date of the re-training.
5. F MAC along with RO Mostar should take measures that within general survey procedures the entire minefield is encompassed within the task, not only a part of it. The task planned (ID 10467) was of 18.770 m². In order to encompass the entire minefield with one row of PROM mines, this task should be enlarged for about 3.000m². This would absolutely remove the documented mine threat on the area.

ANNEXES: [Not made available.]

- A Initial Report
- B Board of Inquiry
- C Copy of the General survey Report for this task with the data on mining
- D Written statements of the personnel involved
- E Map of Zavala area scale 1: 25.000
- F Site sketch and accident location sketch
- G Photographs of the site and of the accident location
- H Copies of all the documentation from the site managed by site manager
- I Record on Investigation by the police
- J Copies of deminers' insurance

Signed: All members of the Inquiry board.

Distribution: [The Demining group], F MAC, RS MAC

Victim Report

Victim number: 428	Name: Name removed
Age: 34	Gender: Male
Status: deminer	Fit for work: DECEASED
Compensation: not made available (insured)	Time to hospital: not applicable
Protection issued: Frag jacket Helmet Short visor	Protection used: Frag-jacket

Summary of injuries:

severe Arms
severe Chest
severe Hand
severe Head
severe Legs
FATAL

COMMENT: Victim died immediately. No medical report was made available.

Analysis

The primary cause of this accident is listed as a *"Field control inadequacy"* because it seems that the Victim was cutting vegetation in a manner that was in breach of SOPs and his error was uncorrected. The secondary cause is listed as *"Inadequate equipment"* because the use of shears to cut undergrowth in PROM-1 areas is fraught with danger, and this fact is well known. The provision of appropriate equipment and the use of appropriate methods are a management responsibility and the failure to do so is a significant *"Management/control inadequacy"*.

The MAC's Accident report was thorough and (although the difficult English has been left unpolished) it describes the hidden mine very well. The deminer may well have been working as trained when the accident occurred. While he could not literally "cut" a PROM fuze with shears, in trying to do so he could easily initiate the mine. This accident illustrates the need to cut undergrowth in PROM-1 areas using a protected machine whenever possible.