

# DDAS Accident Report

## Accident details

<b>Report date:</b> 27/03/2017	<b>Accident number:</b> 822
<b>Accident time:</b> 15:00	<b>Accident Date:</b> 13/01/2017
<b>Where it occurred:</b> KSDT Area 002. Karen State, Myanmar	<b>Country:</b> Myanmar
<b>Primary cause:</b> Other (?)	<b>Secondary cause:</b> Other (?)
<b>Class:</b> Excavation accident	<b>Date of main report:</b> 14/03/2017
<b>ID original source:</b> KMAC_1	<b>Name of source:</b> AVS
<b>Organisation:</b> [Name removed]	<b>Ground condition:</b> dense vegetation, rocks/stones, steep slope
<b>Mine/device:</b> K_improvised_mine-IED	<b>Date last modified:</b> 27/03/2017
<b>Date record created:</b>	<b>No of documents:</b> 1
<b>No of victims:</b> 1	

## Map details

**Map east:** 97°58'16.48"E

**Map north:** 17°30'27.19"N

## Accident Notes

inadequate communications (?)  
inadequate medical provision (?)  
long handtool may have reduced injury (?)  
metal-detector not used (?)  
no independent investigation available (?)  
non injurious accident (?)  
use of rake (?)  
standing to excavate (?)

## Accident report

Demining in Myanmar is constrained by the central government which does not allow international demining agencies to conduct search & clearance tasks. However, since 2014 it has been apparent that individual State Authorities want demining to be done and some of these authorities encourage and support voluntary demining efforts. In 2016, the Karen Peace Council signed an agreement with the central Myanmar government that obliges them to clear mines and ERW in their area. Internationals are permitted to assist, but cannot lead the effort.

The only report of this accident was made available by the Victim in March 2017. The substance of that report is reproduced below.

The Victim was working as a volunteer deminer using equipment remaining from a previous voluntary clearance task conducted nearby.

Local people reported that there were three or four defensive mines placed on the steep side of a gully between a village and the Moei river (marking the border between Myanmar and Thailand). The face of this bank was made up of large rock formations with loose sandy soil and scattered vegetation. The mines were locally manufactured Karen PVC pipe AP blast

mines with split-bamboo pressure activation systems that had been placed defensively, probably in 2008 (so the mines had apparently been in place for at least eight years). No formal record of the mines and their placement was made.



The picture shows the village where the accident occurred.

The victim was the only deminer on site at the time of the accident. A medic was stationed 500m away at the camp hospital.

The search method being employed at the time of the accident was the REDs method, using 3.5m long light and heavy rakes with bamboo handles. A frontal PPE apron and full face visor were worn by the Victim.

The Victim was searching the south east side of the gulley and found that the bank gave way under-foot as he advanced, raking up the slope. The instability made the work arduous, so he took rest breaks at 20 minute intervals. As he worked, he moved all loose spoil and foliage back behind the baseline and then stood on it. He reported that this may have added to the instability of the bank under foot.

No mines were located during the morning and a 1.5h lunch break and rest time was taken.

After the break, the Victim continued to search the South East section of the bank. After 15-20 minutes, while working around a prominent boulder, the heavy rake exposed a mine at approximately 15:00. The rake tines snagged around the wires connecting the batteries to the detonator and explosive charge.

The Victim attempted to unhook the mine by pushing the rake head forward. While doing this, the bank on which he was standing gave way and he fell forward, slipping down the slope. He reported feeling as if someone had pulled his legs back from beneath him.

Having both hands on the rake as he fell, weight was transferred through the rake onto the mine, which detonated either by weight applied directly onto the split-bamboo initiation system or by the rake tines making an electrical connection that fired the detonator.

Because the bank was so steep, the mine was approximately 1.2 meters higher than the Victim, who was already falling when the mine detonated. It seems that most of the blast and associated debris spread above him. Some small fragments left light marks on the blast visor, but the Victim suffered no physical injuries other than temporary hearing loss and mild disorientation/concussion.



The picture shows the mine involved, with a charge ranging from 50-100g of gelignite in the blue plastic pipe (and two penlight batteries in the yellow plastic pipe). The two are connected with electrical wire that is sometimes several metres long. Fragmentation variations use steel pipe to hold the explosive charge.

The Victim had ringing ears and was stunned, so withdrew from the area to rest. The head of his two-tined rake had been broken off and damaged. The Victim continued searching for the remaining mines on the following day.

### Victim Report

<b>Victim number:</b> 1016	<b>Name:</b> [Name removed]
<b>Age:</b> 32	<b>Gender:</b> Male
<b>Status:</b> deminer	<b>Fit for work:</b> yes
<b>Compensation:</b> Not appropriate	<b>Time to hospital:</b> Not appropriate
<b>Protection issued:</b> Frontal apron, Long visor	<b>Protection used:</b> Frontal apron, Long visor

**Summary of injuries:** No recorded injuries.

COMMENT: Minor hearing. No medical attention was given, so no medical report generated. The Victim continued working the next day.

### Analysis

This was an accident that did not occur during conventional Mine Action activity so the choices open to the deminer were limited. The primary and secondary causes of this accident are listed as "Other" because it is not clear whether the angle of the ground, the method, or a deminer error caused the detonation. However, the risk was suitably managed because the combination of the method and the PPE in use (long handled rakes in the REDS system and frontal blast protection) meant that no significant injury resulted.

The breaking of the rake head raises questions about whether its design was appropriate: preferred rakes have stainless steel heads and handles that do not separate in a blast.

The long list under "Notes" partly reflects the fact this accident occurred during informal demining.