

# DDAS Accident Report

## Accident details

|   |  |
|---|--|
| <b>Report date:</b> 18/05/2006                          | <b>Accident number:</b> 279                      |
| <b>Accident time:</b> not recorded                      | <b>Accident Date:</b> 31/07/1991                 |
| <b>Where it occurred:</b> not made available            | <b>Country:</b> Kuwait                           |
| <b>Primary cause:</b> Management/control inadequacy (?) | <b>Secondary cause:</b> Inadequate equipment (?) |
| <b>Class:</b> Missed-mine accident                      | <b>Date of main report:</b> [No date recorded]   |
| <b>ID original source:</b> KMOD 20/SER 7                | <b>Name of source:</b> Various/AVS 2001:K3       |
| <b>Organisation:</b> Name removed                       |  |
| <b>Mine/device:</b> VS50 AP blast                       | <b>Ground condition:</b> sandy                   |
| <b>Date record created:</b> 19/02/2004                  | <b>Date last modified:</b> 19/02/2004            |
| <b>No of victims:</b> 1                                 | <b>No of documents:</b> 1                        |

## Map details

|                                |                              |
|--------------------------------|------------------------------|
| <b>Longitude:</b>              | <b>Latitude:</b>             |
| <b>Alt. coord. system:</b>     | <b>Coordinates fixed by:</b> |
| <b>Map east:</b>               | <b>Map north:</b>            |
| <b>Map scale:</b> not recorded | <b>Map series:</b>           |
| <b>Map edition:</b>            | <b>Map sheet:</b>            |
| <b>Map name:</b>               |                              |

## Accident Notes

no independent investigation available (?)

inadequate investigation (?)

mechanical follow-up (?)

## Accident report

The details of Kuwait Boards of Inquiry are considered 'Commercial in Confidence'. The following summary is gathered from various documentary and anecdotal evidence made available during the research. All anecdotal evidence is drawn from sources who were in Kuwait at the time of the accident.

The victim arrived in Kuwait on 10<sup>th</sup> June 1991, so had only been working there for six weeks at the time of the accident.

The victim was a flail operator using a JSFU AARDVARK. At the time to change operators, the victim walked from the cab in a flailed area, walking in the flail's tracks. [The "cab" is at the rear of the machine.]

The "informal SOP" at the time allowed operators not to drive the machine out of the mined area at changeover times. In this case, the victim tried to change from one track to the other as his replacement operator and his Team Leader approached. As he changed tracks, he stood on the ground between the tracks and trod on a VS50 AP mine. The VS50 is over-pressure protected (a sustained pressure is needed) and so "resistant" to detonation by flails.

At the time, it was not known whether the flails were 100% effective but the operators and managers were apparently confident of their abilities. Trials were carried out later and they confirmed that the flail did not clear 100% of the VS50 mines. The Aardvark flail (as configured then) was little used after this accident.

Following the accident the Team Leader was dismissed, but later employed again as a replacement for the victim.

The JSFU Aardvark units were later modified to have a greater rotor speed which was believed to make them more effective. The actual effectiveness of this was apparently not satisfactorily demonstrated to the field operatives.

## Victim Report

|   |                                       |
|---|---------------------------------------|
| <b>Victim number:</b> 354               | <b>Name:</b> Name removed             |
| <b>Age:</b>                             | <b>Gender:</b> Male                   |
| <b>Status:</b> driver                   | <b>Fit for work:</b> presumed         |
| <b>Compensation:</b> not made available | <b>Time to hospital:</b> not recorded |
| <b>Protection issued:</b> Various       | <b>Protection used:</b> none          |

### Summary of injuries:

AMPUTATION/LOSS

Leg Below knee

COMMENT

No medical report was made available.

### Analysis

The primary cause of this accident is listed as a "*Management/control inadequacy*" because the SOPs that allowed the victim to walk in areas presumed clear after the passage of the flail were based on the unfounded belief that live mines were not left in its wake. It was known at the time that the flails were not 100% effective – especially in sand and when facing over-pressure resistant mines. The secondary cause is listed as "*Inadequate equipment*" because the machine was not suitable to be used in the manner that it was deployed.

SOPs were reported to have later changed to reflect the fact that flailed areas should not be considered safe, and that a second method of clearance should be employed after the flail. That its effectiveness had not been objectively assessed prior to deploying the machine as a primary clearance tool was a significant management failing.

The fact that the Field Supervisor was dismissed and then hired again to take the victim's place adds weight to the view that it was not inadequate field supervision that caused the

accident, but the apparently cavalier attitude of a management pressed for time and eager to make maximum use of machines.

There is a paucity of reliable data for many of the accidents that occurred in Kuwait. If any reader has additional detail, please send it for inclusion.