

# AMAS 29

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## Safety and Occupational Health (Demining Worksite Safety)

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### **Warning**

The Afghanistan Mine Action Standards (AMAS) are subject to regular revision. This document supersedes all versions of the AMAS published prior to the cover date. Users should contact MACCA ([mapa@MACCA.org](mailto:mapa@MACCA.org)) to obtain the latest approved version of AMAS.

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## **Amendment Record**

### **Management of AMAS Amendments**

The AMAS series of standards are subject to formal review on a yearly basis; however this does not preclude amendments being made within the year for reasons of operational safety and efficiency or for editorial purposes. As amendments are made to this AMAS they will be



## **Safety and Occupational Health (Demining Worksite Safety)**

### **29.1 Introduction**

29.1.1 The needs to reduce risk and to provide a safe working environment are fundamental principles of mine action management. Risk reduction involves a combination of safe working practices and operating procedures, effective supervision and control, appropriate education and training, equipment of inherently safe design, and the provision of effective personal protective equipment and clothing.

29.1.2 Given the wide range of operational settings and mine action activities, it is not possible to provide a precise and complete set of specifications or provisions that apply to all mine action worksites. Thus, mine action organisations should develop and maintain management procedures and processes that will enable safety and occupational health (S&OH) risks in the worksite to be identified, evaluated and reduced in a systematic and timely manner.

29.1.3 The provision of a safe working environment includes the design and layout of a demining worksite by fencing and marking hazardous areas, controlling the movement of deminers, visitors and the local population, enforcing safety distances, and providing effective medical cover and casualty evacuation procedures. This requires national mine action authorities and demining organisations to establish policies and develop and maintain procedures for worksite safety.

### **29.2 Scope**

29.2.1 This chapter provides specifications and guidance on the development and implementation of policy and documented procedures and practices which aim to establish and maintain a safe demining worksite

### **29.3 General Requirements**

29.3.1 The demining worksite shall be designed to:

- a) Provide a clearly visible separation of hazardous areas including fragmentation and evacuation safety areas, cleared areas, uncleared areas and unknown areas of and around the worksite.
- b) Control the movement of deminers and visitors (including members of the public) at the worksite.
- c) Limit the number of deminers and visitors allowed into the fragmentation and evacuation safety areas.
- d) During the controlled destruction of mines and UXO, take all reasonable precautions to exclude deminers, visitors and members of the local population from the fragmentation and evacuation safety areas, or provide suitable protection inside buildings, bunkers or mobile structures.
- e) Include measures to prevent structural and environmental damage.

### **29.4 Marking of hazardous areas**

29.4.1 Safe and hazardous areas within the worksite shall be separated by providing clear and consistent marking.

## 29.5 Control of Entry into Fragmentation and Evacuation Safety Areas

29.5.1 Demining often proves to be an attractive event for the local population, especially children. Procedures shall be developed for controlling the entry of unauthorised persons into mined areas, onto the demining worksite and into fragmentation and evacuation safety area. This should be achieved by:

- a) Informing the local population, demining workers and demining worksite visitors of the extent of the worksite, and the fragmentation and evacuation safety areas.
- b) Physically controlling entry into the hazard areas during the mine or UXO hazard destruction processes by warning signs and positioning sentries.

29.5.2 Planning and execution of demining operations should minimize disruption to the local population, which may need to move through fragmentation and evacuation safety areas. It is unrealistic to expect that the public can be prevented from entering associated fragmentation and evacuation safety areas of whole demining worksites for the duration of the clearance task. On the other hand it is important to reduce to tolerable levels of the risk of harm to the public. The following may provide guidance on the development of a reasonable and workable compromise:

- a) The extent of the fragmentation area should be equivalent to the fragmentation hazard of the likely mine/UXO contamination in the worksite.
- b) The public, having been given appropriate warnings should be allowed to pass on marked routes through the fragmentation area, EXCEPT when demolitions are taking place. When a demolition is taking place the demining organisation shall establish a cordon with sentries on routes at the entry points of the fragmentation and evacuation safety area to prevent entry into the area. It may also be necessary to restrict entry when particular munitions with a large fragmentation radius, such as bounding mines are being cleared.
- c) An inner safety distance should be identified. For example, a radius equivalent to the blast area from the likely mine/UXO contamination, demining lane separation, or detonator hazard.. The minimum radius of such a distance should be 25m. The public should not be allowed to enter this safety zone at any time when demining is being undertaken on the worksite.

29.5.3 Where the location of the worksite means that this inner safety distance cuts a frequently used road or path, an alternative solution should be considered. If the worksite is small enough, the demining unit should phase operations in such a way to minimize disruption to the public. If the worksite is large, the demining organisation should seek the assistance of the local administration, police or other appropriate emergency services or they identify mark and possibly supervise the creation of a suitable diversion route. If no such diversion route is feasible, the demining unit should consider using protective works.

## 29.6 Control areas

29.6.1 Effective control of the worksite will be achieved by establishing and clearly marking a number of areas for safety and administration. Such areas shall be outside the relevant safety distances from all contaminated areas, clearance activity and explosive storage.

## **29.7 Vehicle Parking Area**

29.7.1 The vehicle parking area shall be a used area or cleared area large enough to provide safe parking for demining unit and visitor's vehicles. The boundary of the parking area shall be clearly marked and sign posted. The parking area sign posting shall indicate directions to the demining worksite and visitor reporting area. Where appropriate these directions should include a map that indicates any mine or UXO hazards in close proximity to the parking area or along the route from the vehicle parking area to the visitor reporting area of the demining worksite.

## **29.8 Visitor Reporting and Briefing Area**

29.8.1 The visitor reporting area and briefing area shall be a clearly marked and identifiable area that is outside the fragmentation and evacuation safety area of the demining worksite.

## **29.9 Safety Lanes**

29.9.1 The demining organisation shall establish cleared safety lanes to provide access to and around the demining worksite. Cleared safety lanes shall be wide enough to provide safe access for personnel and equipment to the worksite. Safety lanes cleared for CASEVAC shall be wide enough for the safe execution of documented CASEVAC procedures. Safety lanes shall be not less than 2.0m wide

## **29.10 First Aid**

29.10.1 Each demining worksite shall include a first aid post, organised and equipped as recommended in IMAS 10.40. The first aid post shall:

- a) be identifiable and clearly marked;
- b) be equipped with appropriate first aid and medical supplies and equipment;
- c) where appropriate, be attended by suitably qualified and experienced medical or para-medical staff; and
- d) Provide easy access to the clearance area of the worksite and easy access for ambulances.

## **29.11 Rest Areas**

29.11.1 The worksite shall include clearly identifiable and marked rest areas for deminers. Rest areas shall be located outside the fragmentation and evacuation safety area and should be equipped to provide staff with protection from adverse or extreme weather conditions.

## **29.12 Explosive Storage Area(s)**

Explosives or mine and/or UXO hazardous material may be stored on a demining worksite. Explosives used in the demining process should be stored in a container approved for the type and quantity of explosive being stored, which will be located outside the fragmentation and evacuation safety area of the demining worksite. Where provision of this standard of container storage is impracticable, the demining organisation shall be responsible for providing adequate safety measures (protective works, safety distances, physical security etc.) and should include protection against environmental factors in accordance with explosive manufacturers' instructions. Such storage should be considered as a temporary measure only.

### **29.13 Demining Incidents/Accidents**

29.13.1 Procedures for the response to demining accidents and incidents are detailed in AMAS 26 and shall be formally documented in organizations SOPs. The SOPs should include:

- a) The organisation and capabilities needed to respond to a demining incident, including the procedures, training, equipment and material.
- b) Procedures for the investigation, analysis and corrective action to be taken following a demining incident.

### **29.14 Responsibilities and Obligations**

29.14.1 Mine Action Centre for Afghanistan (MACCA) shall develop a policy and establish and maintain documented procedures for safety and occupational health on demining worksites to be adopted within Afghanistan. The documented procedures should include:

- a) Standards for safety markings to be used on demining vehicles.
- b) Standards for an emergency response and casualty evacuation procedures on demining worksites.
- c) Procedures for the reporting and investigation of demining incidents and accidents.

29.14.2 The Area Mine Action Centres (AMACs) are responsible for liaising with clearance organisations to assist with the planning, coordination and providing the quality assurance capability. This ensures that mine and UXO clearance within their specific area is conducted in the most safe, effective and time efficient manner, and in accordance with AMAS which have been developed from international mine action standards (IMAS).

29.14.3 The demining organisation shall establish and maintain documented SOPs that comply with the provisions of IMAS, the AMAS and other relevant standards or regulations.

29.14.4 Demining workers shall:

- a) Take all reasonable care for their safety and that of other persons on the worksite.
- b) Comply with instructions given for their own conduct and safety, especially those contained in SOPs.
- c) Comply with AMAS on conduct and safety on worksites.
- d) Report to their superior any situation, which they have reason to believe could present a worksite hazard, which they cannot themselves correct.