

## **20. MINE DETECTION DOG (MDD) SUPPORT**

### **1. General**

Use of Mine Detection Dogs (MDD) in clearance operations has for a long time been very effective way of performing clearance, especially in area reduction and in areas with high contents of metal fragments, where the use of mine detectors is not effective .

Experience has shown that an acclimatization period may take as long as 1-2 months for MDD to get acclimatized to prevailing weather conditions, vegetation, soil condition and surrounding environment.

Using MDD should be regarded as a method of confirming the presence of mine contamination rather than identifying the location of every individual mine. MDD have proven to have a problem in detecting tripwires and should therefore not be used for such work, unless they are specially trained and tested accordingly.

### **2. Requirements**

Proper testing and accreditation of the MDD should be conducted in proper testing and accreditation ground, and before they are allowed to work. During the first three (3) months of deployment, four (4) MDD are to be used in all field operations. After assessment by ANAMA, the number of MDD may be reduced to a minimum of two (2) MDD.

### **3. Limitations to the use of MDD**

MDD are normally not suitable to work in heavily contaminated by explosives enclosed spaces, unless specifically trained for such conditions.

MDD and handlers are at risk from tripwire-activated mines, especially in thick vegetation. Unless MDD are specifically trained to detect them, they should not be used in areas, where the presence of tripwire-activated mines is suspected.

MDD are not effective without proper management and verification on a continuous basis. This is to include daily evaluation of MDD and continuous training, when MDD are identified as not complying with the working standard. Handlers are to be supervised by supervisors on a continuous basis during work.

MDD will not be tasked in high-density minefields, except for Quality Assurance operations subsequent to the clearance of the field. As a minimum, MDD may be tasked to support the following operations:

- Verification, survey or area reduction of suspected mined areas;
- Clearance of low-density minefields;
- Clearance of suspected mined railways;
- Clearance of suspected mined roads;
- Clearance in areas, where mine detectors are unable to operate;
- Quality Assurance on all tasks where the ground conditions allows the MDD to operate.
- Clearance of an evacuation lane from the nearest safe place to a casualty in case of a mine accident. Normally, only specially trained, selected MDD and handler will carry out this activity.

The need for a full clearance operation may be determined after verifying the existence of mines, using MDD in suspected low-density mined areas.

When high-density minefields are cleared by manual demining techniques, MDD can be used for External Quality Control to rapidly confirm that the required parameters of clearance have been met.

#### **4. Training**

The training of MDD must include all mines and munitions, included in ANAMA Mine/UXO identification handbooks, as well as exercises in different types of ground and areas before they are used in operations. The following types of area should be considered for MDD to be used in Azerbaijan:

- Forest ;
- Open areas;
- Gravel roads and verges (Dirt roads);
- Edges and verges of asphalt (surfaced) roads;
- Railways;
- Urban and residential areas;
- Canals;
- Verges of canals.

Training minefields, where MDD will practice, must be laid at different periods of time and the MDD should be tested on mines that have been buried for a certain period (more than two months is preferable).

Explosives or mines, used for testing or training exercises, should be buried at different depths. Amounts of explosives and the length of the period that they have been buried must also vary.

In order to maintain maximum safety and performance during field operations, the MDD and their handlers should receive refresher training and evaluation on a regular basis, at least every third month.

#### **5. Clearance Drill**

- Searching methods may vary depending on how the dog is trained. There must be an overlap of at least 25cm on each side of every searched lane;
- Before a dog starts to search a suspected area, the MDD Supervisor should always carry out a control exercise to confirm that the MDD are in good condition and capable of working;
- A break of 15 to 20 minutes should be considered as a minimum for every working hour;
- All markings must not be confusing and in accordance with Azerbaijan National Standards for Mine Action;
- In order to confirm that the dog's sense of smell is tuned to the local area conditions, the dog should always be warmed up in a training area and start to search one meter outside the target area;

- When something suspicious is detected, the dog will normally indicate the discovery by sitting close to the finding, without moving around or on the finding. Barking and scratching is not acceptable;
- When a dog has indicated presence of explosives, an area of at least one meter around the indication point (altogether 2 sq. m. unless no reading has been given from the mine detector) should be cleared, before the dog can be allowed to continue;
- The size of the area that can be searched by a dog in one day depends on a number of factors, such as: temperature, vegetation, number of encountered mines, level of contamination with explosives and the capacity of the manual demining team that will follow up on findings.

## **6. Buildings**

Specially trained MDD have the ability to search buildings and may be used for this purpose subsequent to a specific test, undertaken by ANAMA.

## **7. Medical factors, healthcare, kennels and feeding**

The following medical factors should be taken into consideration before using MDD:

- The health of the dog must be certified. X-ray pictures of hips, leg joints and back are to be attached to written comments from an authorized veterinarian;
- The dog should be free of hip or leg joint displacement problems. In specific cases this should be assessed together with a veterinarian;
- A veterinarian must produce a document certifying dog's good health and fitness;
- Veterinarian, appointed to examine MDD prior to training, must be acceptable to the organization employing the MDD and the organization training them.

Whilst MDD are in kennels, only certified handlers/kennel assistants should feed, remove MDD, clear or enter the kennels. The dog's health must be monitored daily based on the checklist beneath as a minimum:

<b>Temperature</b>	<b>Legs</b>	<b>Grooming</b>
<b>Nose</b>	<b>Paws</b>	<b>Anal area</b>
<b>Mouth</b>	<b>Penis/ Vagina</b>	<b>Tail</b>
<b>Eyes</b>	<b>Testicles</b>	
<b>Ears</b>	<b>State of Coat</b>	

The handlers are normally responsible for reporting any medical or health problems with their MDD to their Supervisor. The following issues must be considered before the dog is allowed to start working or continue working after a rest period:

- The dog must be fully fit and not suffering from any ailment that will affect its performance;
- Availability of sufficient water at the task site. This is at least five liters per dog per day;
- The dog must be given frequent rest. The rest intervals may vary from dog to dog. The climate will also influence rest intervals. If it is impossible to motivate the dog to work, it should not be used;

- MDD have limited capability to work in hot climates and can seldom work when the temperature exceeds 34° C or below 5° C. During hot or cold weather conditions, MDD Supervisor may take decision to stop the working dog;
- If vegetation has been burnt off, MDD should not be used in that area for at least five days;
- In case of injury or illness, suitable transport must be available at the task site for evacuation of the dog to a more suitable health care center.

### **8. Accreditation of MDD and MDD teams**

All organizations, intending to use dogs as part of an ANAMA clearance concept, must ensure that the MDD and the MDD teams have received the necessary accreditation from ANAMA.

The accreditation will only be given subsequent to a practical test of the dogs, an evaluation of the organization and the operational concept (SOP), which will be used by the organization when working with the dogs.

ANAMA reserves the right to order additional tests of the dogs, if there are accidents or other indications showing that the MDD team is performing poorly.

Before accreditation, the MDD organization must provide the following information to ANAMA:

<b>Company review/outline</b>	Detailed information about the organization, such as how the project is intended to be organized and managed
<b>Curriculum Vitae</b>	For all team leaders, MDD handlers and management staff. Information about how the dog handlers have been trained etc.
<b>SOPs</b>	A complete SOP, covering all aspects of the operation, supervision, quality control and management
<b>Dog information</b>	Information about every dog that is intended to be used, previous accreditation, age, type, name, vaccination, limitations, etc.

The Standing Operating Procedures for the MDD organization must include the following information:

<b>Intended type of clearance</b>	Will the dogs be used for primary clearance, road clearance, quality control, area verification, area reduction of minefields, etc.?
<b>Detailed operational concept</b>	Search pattern, marking, overlap, how many dogs will clear the same area and how, action on findings, dealing with findings, different search techniques depending on the task, manual demining back-up, weather and ground limitations, etc.
<b>Internal testing procedures</b>	Daily testing procedures before work. Monthly testing procedures. How will the dogs be internally tested?
<b>Tripwires</b>	Is the dog trained to detect tripwires?
<b>House/buildings clearance</b>	Is the dog trained to search houses/buildings?
<b>Health care</b>	Daily/weekly health cares routines.
<b>Communication and medical evacuation procedures</b>	Communication procedures and procedures for medical back-up and evacuation in the event of accidents

The most important element of the accreditation is the accreditation test. The following general rules will be applied when testing dogs:

<b>Testing area</b>	All testing will be carried out at the specified testing sites
<b>Weather conditions</b>	Testing of the dogs will only be carried out during weather conditions similar to those during normal clearance operations with MDD. If the weather conditions are not suitable for MDD use, as per SOP, the testing will be called off and postponed till weather conditions improve. As a general rule, tests will not be carried out, if it is too cold, too hot or raining.
<b>Type of mines/UXO</b>	The testing area must be the same for all tests and include as a minimum ten (10) pieces of the following mine/UXO types: PMN-series of mines; PMD-series of mines; POMZ-2M; OZM-72; TM-series of mines; Mortars; Hand grenades, various types; Projectiles; TNT blocks; Gunpowder, various types.
<b>Tripwires</b>	If the dog is intended to be used for detection of tripwires, tripwires should also be included in the test.
<b>Search area</b>	Bloxes of 10 x 10 meters, containing varying number of mines, will be used. Each box will have from zero to three items. Each dog will search a minimum of four boxes (400 m <sup>2</sup> ).

<b>Training area</b>	A training area will be available to allow an organization to evaluate the dogs internally before the test starts.
<b>Age of test ground</b>	No dogs will be tested on areas that have been used recently for the testing of other dogs. Ageing time since last test is minimum 4 weeks. A test box will have mines that have been in the ground untouched for at least 4 weeks.
<b>Depth of mines/UXO</b>	The mines/UXO will be buried to a maximum depth of 20 cm.
<b>Clearance technique during the test</b>	The area must be searched in accordance with the SOP of the organization to be tested.
<b>Pass criteria</b>	The SOP is adhered. More than 90% indications of all mines/UXO per dog. All indications are within 50 cm from the mine/UXO. 2 or less false indications per dog per box.
<b>Failure criteria</b>	3 or more false indications per dog per box. Less than 90 % of all is items found per dog.
<b>Action on failure</b>	If a dog fails to pass the test, the MDD/handler cannot be re-tested within the next 7 days. If alarming results are achieved for several of the dogs belonging to the organization, ANAMA will have the right to terminate the accreditation of that organization. If a dog fails during the second test, the third test will only be undertaken after a month.
<b>Additional regulations</b>	The dog handler has the right to observe the area(s) prior to the test and to walk the dog around the testing area, outside the boundary marking tapes before the test commences.
<b>Marking on finds</b>	When a mine is found, the handler must mark the area in accordance with his organization's SOP.
<b>Evaluation</b>	The evaluation team will consist of minimum three people, the ANAMA Training and QA Officer and two other external evaluators appointed by ANAMA. The manager or the senior supervisor of the tested organization has the right to be present during the test, if desired

Internal evaluations (including a field testing) of the dogs must be undertaken by the organization at least every month. The organization's testing site may be used. The internal evaluation processes must be included in the SOP. Results from the tests must be recorded properly and signed by the person responsible for the test. The following is the minimum test requirements:

- Minimum 60 m<sup>2</sup> must to be searched per dog;
- At least 6 mines/items in the area per dog, three mines should be AP-mines regularly used in Azerbaijan;
- Mines must be buried in the ground for at least 4 weeks.

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If the dog fails the test, the dog must be taken out of work for re-training for a minimum of one week. A new test must be conducted and passed before the dog can be used for clearance again.

Records from the internal tests must be made available to the ANAMA upon request. Dates of the forthcoming monthly evaluation test should be reported to ANAMA in advance before the test. ANAMA QA personnel may visit the dog evaluation test at any time without appointment or warning.