

QUALITY ASSURANCE

References

1. This document has been developed with reference to the following documents:
 - i. IMAS 07.30 Accreditation of Demining Organizations
 - ii. IMAS 07.40 Monitoring of Demining Organizations
 - iii. IMAS 09.10 Clearance Requirements
 - iv. IMAS 09.20 Guidelines for Post Clearance Sampling

Scope

2. All operational, administrative and support activities.

Objective

3. To outline the methodology of QA procedures employed in Jordan.

Introduction

4. This standard adopts a two-stage approach.

- i. Stage 1 Quality Assurance (QA)
- ii. Stage 2 Quality Control (QC)

5. QA involves the accreditation and monitoring of the clearance organisation before and during the clearance process. QA is a measurement of agency compliance with agency SOP. This process is beneficial to both organisations and compliments the internal QA of the agency. QA will be conducted through a process of both announced and unannounced QA visits, however the emphasis will be placed on announced QA incorporated into an published QA plan.

6. QC involves the process of an inspection of cleared land before it is formally released to the beneficiary for use. QC checks will vary depending on the clearance technique such as mechanical options, manual clearance and factors such as the mine/UXO threat and the soil conditions.

7. This combined application of quality assurance (before and during the clearance process) with post-clearance quality control will contribute to achieving an acceptable level of confidence that the land is safe for its intended use. The NCDR may request that agency release clearance assets to assist in the QC of their task sites.

8. It is paramount that the implementation of QA and QC is impartial and judicious. Throughout the humanitarian demining process, QA is a continuous activity accomplished through QC (inspection), training, supervision and development of procedures.

9. QA must enhance the overall mine/UXO clearance process and not slow it down unnecessarily.

QA Framework

10. The basic framework for meeting NTSG and determining the degree of QA is as follows:

- i. Adherence to approved training programme.
- ii. Adherence to the NCDR NTSG.
- iii. Adherence to individual SOPs accredited and approved by the / NCDR.
- iv. Discipline in the danger area.
- v. Levels of supervision and the associated internal QC checks.
- vi. The mine/UXO threat.
- vii. The final use of the land will determine the depth of clearance

QA for manual clearance operations

11. Manual clearance operations fall into two categories; clearance with metal detectors and excavation. For manual clearance effective QC will provide the majority of the overall QA process.

Mechanical assistance to clearance operations

12. QA is an integral part of mechanically clearance operations and the type / quantity of QA will be dependent on the machine’s role, terrain and available assets. In support of manual clearance, mechanical clearance can be used to prepare the ground prior to deploying a manual clearance team.

NCDR QA task inspection

13. The NCDR QA team shall conduct on site inspections to ensure that the demining organisation is conducting operations in accordance with their SOP and the NTSG (National Technical Standards and Guidelines). During the visit the QA Officer shall complete a QA Evaluation report and brief the task Supervisor, Team Leader or senior member on his findings. The Supervisor shall be asked to complete relevant sections of the form and the organisation shall be given a copy at a later date.

14. An example of a current Task Site Quality Assurance form can be obtained from the NCDR website www.ncdr.org.jo

Terminology for Level of Compliance

QA Assessment: Level of Compliance to Organisation SOP and NTSG

HIGH <input type="checkbox"/>	MEDIUM <input type="checkbox"/>	LOW <input type="checkbox"/>	FAIL <input type="checkbox"/>
Good	Satisfactory	Warning	STOP

15. **Low:** As a result of one or more non-compliances. A verbal warning shall be given and written in the Comments and Recommendations table. It is at the discretion of the QA Officer whether to STOP operations

and/or stipulate a period of time by which the compliance must be corrected, however, any **serious non-conformities shall be corrected immediately**.

16. Fail: As a result of one or more Critical non-compliances work Shall Stop. The reason shall be explained by the QA Officer and written in the Comments and Recommendations table. Activities shall be suspended pending compliance and if necessary, a review by the NCDR and the organisation will take place.

Non-conformities

17. The definition of critical non-conformities must take into account the clearance methodology used by the demining organisation. For example, it would clearly be inappropriate to use residual metal fragments as a critical non-conformity if excavation method were to be used as part of the primary clearance technology.

Example of Critical Non-conformities

18. Missed mines / UXO, disregard for safety (no medic, safety vehicle or communications, not wearing PPE), failure to comply with TO, inadequate supervision or failing to comply having already receiving a warning.

Special Attention

19. It may be decided that Special Monitoring of the demining organisation by the QA Officer or additional personnel is necessary for the following reasons:

- i. It is concluded, after one or more QA assessments are conducted that, the organisation is not operating in compliance with their SOP and the NTSG. This may result in the organisation receiving a verbal warning or work being stopped. The QA Officer shall ensure that the cause of the non-compliance is corrected and that operations are consistent with the SOP. This may require the QA Officer conducting more frequent inspections and devoting additional time with the organisation concerned.
- ii. Starting a task in an unfamiliar area.
- iii. Working on a difficult or hazardous task (E.g., undulating ground, rocky, highly vegetated, residential, trip-wires, improvised mines).
- iv. When inexperienced or new key personnel are managing a task.
- v. Handover to NCDR staff as part of the capacity building process.
- vi. Commencing operations after a lengthy period away from operations or after completing a training course.
- vii. Introduction of new demining procedures or equipment.
- viii. Conducting field trials with equipment and machines.
- ix. Multiple assets working at a task.
- x. Commencing operations following a demining accident.

SAMPLING

20. NCDR QA teams will do the inspection of cleared land. This inspection forms part of a management process which aims to verify the quality of clearance, and to establish sufficient confidence that the demining organisation has removed and/or destroyed all mine and UXO hazards from the specified area to the specified depth, in accordance with the clearance requirements outlines in Chapter 7 - Clearance Requirements.

21. The effectiveness and validity of inspection by sampling requires the clearance process to be 'continuous and under control'. A 'continuous' process implies that each lot presented for inspection should include land, which has been cleared under similar conditions; i.e. by assets with similar capabilities, using similar operational procedures and with similar equipment.

22. The procedures and equipment used by the inspection body to inspect the samples of cleared land should be agreed with the clearance organisation as part of the contract or agreement. Any major changes to sampling or inspection procedures (such as the introduction of mechanical or dog-assisted sampling) should be agreed between the NCDR and demining organisation prior to the start of inspection. The NCDR and the demining organisation should agree a mutually acceptable time limit within which the sampling inspection must take place.

23. A 'lot' should be considered as 'cleared' only if all the samples in the lot are found to be free of mines or UXO down to the depth specified in the contract. Where any sample in the lot is found to contain one mines or UXO, this will constitute a 'critical non-conformity', and the lot containing that sample should be declared to have failed the inspection.

24. Cleared land may contain other indicators of potential non-conformity, such as residual metal fragments following detection by metal mine detectors, or residual traces of explosives following detection by explosives detectors. Such cases could indicate a potential critical failure of the demining process (equipment, people or procedures), and again constitute a critical non-conformity. The conditions for acceptance or non-acceptance of all categories of non-conformity should be agreed between the NCDR and the demining organisation prior to the start of clearance.

Corrective Action

25. The NCDR will determine the corrective action to be taken on lots that are rejected pending the findings and recommendations of an incident investigation as outlines in Chapter 9 - Mine / UXO incident investigations.

26. The demining organisation should investigate every critical non-conformity, shall provide the inspection body with reasons for each critical non-conformity, and shall provide a programme of corrective action. If a lot fails re-inspection following corrective action, the inspection body may require the lot to be cleared again using a

different sub-unit using different operational procedures and with different equipment, if these alternate methods exist. If no acceptable reason is given for a critical non-conformity, either by the clearance organisation or by the inspection body, the inspection body should require the lot to be marked and fenced until the reasons for the non-conformity can be established.

27. Lots should not be offered for re-inspection until the demining organisation has taken corrective action as agreed in accordance with the NCDR QA team. The QA team should specify whether normal or tightened inspection shall be used for re-inspection.

28. The sample plan, the methods used for inspection, and the results should be recorded by the NCDR team, including the location, depth, types of hazard and other non-conformities. Details of all corrective action shall also be recorded. All records shall be passed to the NCDR operations department.

Responsibilities

29. NCDR responsibilities

The NCDR shall:

- i. Establish a system for the monitoring of demining organisations which complements the procedures for accreditation and post-clearance inspections
- ii. Specify the national standards and provide guidelines for the monitoring of demining organisations;
- iii. Monitor the work of Demining organisations,
- iv. Ensure that the monitoring system is being applied in a fair and equitable manner,
- v. Ensure that monitoring does not interrupt or delay demining projects.

30. The organisation undertaking demining shall:

- i. Apply management practices and operational procedures which aim to clear land to the requirements specified in Task Orders (TO).
- ii. Maintain and make available documentation, reports, records and other data on demining activities to the NCDR.
- iii. Provide the NCDR with access to all sites, buildings and other facilities which need to be visited as part of the monitoring requirement.
- iv. Provide clearance assets where necessary to assist in the QC of agency Task sites