

# SLNMAS 08

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## Quality Management

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## Introduction

Quality management in the Sri Lankan mine action programme is conducted on mine clearance activities as well as on mine risk education activities.

Control of the mine clearance process (Quality Management) is achieved through the accreditation and monitoring of the mine clearance organisations before and during the clearance process, and by the inspection of cleared land prior to its formal release.

Quality assurance in terms of MRE is conducted by the accreditation of all MRE organisations before they are allowed to conduct MRE activities and by the monitoring of their activities while they are conducting MRE in the field.

As part of its mandate the NMAC is required to ensure that all mine action activities are conducted in accordance with the International Mine Action Standards (IMAS) and the Sri Lankan National Mine Action Standards as established by the NMAC.

In terms of mine clearance, the NMAC requires that all mines and UXO to a depth determined and specified in the task and/or contract are located and destroyed. In order to achieve this objective, a comprehensive quality management (QM) system needs to be developed and implemented to ensure that all areas of the cleared ground are entirely free of any explosive hazards.

The QM process in Sri Lanka shall consist of three distinct stages, namely, the overseeing and evaluation of training, the accreditation of mine action agencies, the monitoring of demining activities and the quality control (sampling) of cleared land prior to its release.

The Quality Assurance Department at the NMAC will be responsible for the QM process in Sri Lanka with QA teams allocated to the district mine action offices (DMAO) who will conduct the physical QM activities on behalf of the NMAC.

# Quality Management

## 1 Scope

This standard defines the process of how Quality Management shall be conducted regarding Mine Action operations in Sri Lanka. The standard spells out the responsibilities of MA agencies and the NMAC personnel responsible for QM and the drills and procedures to be followed in the QM process.

This standard shall only discuss the aspects of monitoring of MA activities and the QC of cleared land. The accreditation of MA agencies is clearly described in the SLNMAS 02. The NMAC Quality Assurance Department shall coordinate all QM activities.

The QA and QC activities shall be planned and conducted on regional level by the DMAOs but the NMAC shall be kept inform of all activities and results on a weekly basis.

## 2 Terms and Definitions

The term “Quality Management” refers to the coordinated activities to direct and control an organisation with regard to **quality**. [ISO 9000:2000]

The term “Quality Assurance” refers to the part of **QM** focused on providing confidence that quality requirements will be fulfilled. [ISO 9000:2000]

Note: The purpose of QA in **humanitarian demining** is to confirm that management practices and operational procedures for demining are appropriate, are being applied, and will achieve the stated requirement in a safe, effective and efficient manner. Internal QA will be conducted by **demining organisations** themselves, but external inspections by an external **monitoring body** should also be conducted.

The term “Quality Control” refers to the part of QM focused on fulfilling quality requirements. [ISO 9000:2000]

Note: QC relates to the *inspection* of a finished product. In the case of **humanitarian demining**, the 'product' is **safe cleared land**.

The term “Random Sampling” refers to the selection of **samples** by a process involving equal chances of selection of each item. Used as an objective or impartial means of selecting areas for **test** purposes.

## 3 Quality Management

The NMAC is responsible to ensure that all MA activities are conducted in accordance with the IMAS and SLNMAS. The only way this can be conducted is by implementing a quality management process.

The Quality Management process comprises of two distinct layers of activity, Internal and External Quality Assurance (QA).

### **3.1 Internal QA**

Internal QA Measures shall be undertaken by every MA organisation as a matter of course. Such activities are an integral part of effective command, control and supervision procedures at all levels within the organisation. The organisation's management personnel are responsible for internal QA of all their activities. MA organisations shall include a chapter in their SOP that fully describes their internal QA process.

### **3.2 External QA**

This external QA process comprises of three complimentary components namely, accreditation of MA agencies, monitoring of MA activities and the post-clearance inspection of cleared land.

#### **3.2.1. Accreditation**

Accreditation is the procedure by which a MA organisation is formally recognised as competent and able to plan, manage and operationally conduct MA safely, effectively and efficiently.

Accreditation is fundamental to the whole mine action QM process. Having thorough and comprehensive accreditation procedures from the outset ensures that a demining organisation is established, staffed, equipped, and has the required systems, procedures and support structures in place prior to any work commencing. Furthermore, the accreditation process checks that the MA organisation is working in accordance with its documented systems and procedures and capable of achieving required standards. As a result of the accreditation process an accreditation agreement is reached with the MA organisation on the standards to which MA is to be carried out. This agreement then forms the basis for all follow-on monitoring activities. SLNMAS 02 provides guidance on accreditation of MA organisations.

#### **3.2.2. Monitoring**

Monitoring is the observation, inspection or assessment of worksites, facilities, equipment, activities, processes, procedures and documentation by suitability qualified personnel to confirm that a MA organisation is working in accordance with its accreditation agreement. Monitoring is described in detail in this SLNMAS.

#### **3.2.3. Post-clearance Inspection**

Post-clearance inspection is the process of measuring, examining, testing or otherwise comparing a sample of cleared land with the clearance requirements. Post clearance inspections supplement accreditation and monitoring and provide additional confidence that clearance requirements have been met. Post-clearance inspection is described in detail in this SLNMAS.

#### **3.2.4. Achieving Confidence**

It may not be necessary for all the components of demining QM to be carried out to achieve the required level of confidence. If for example, thorough and comprehensive accreditation and monitoring [Quality Assurance (QA)] is carried out, it may not be necessary to carry out post clearance inspections [Quality Control (QC)] to ensure confidence in the quality of cleared land.

This emphasises the importance of monitoring in the QM process.

### **3.3 Basic QM principles**

The basic framework for meeting international and national standards and the degree of internal QA is as follows:

- a. Adherence to training standards and enforcement of these standards.
- b. Adherence to the SLNMAS.
- c. Adherence to the organisation's individual SOP.
- d. Evaluation of capacities before clearance (i.e. evaluation of dogs, mine detectors, demining machines, MRE teams, etc).
- e. Discipline on demining worksites.
- f. Levels of supervision and the associated internal QA checks.
- g. The mine/UXO threat.
- h. The final use of the land and threat encountered will determine the depth of clearance.

## **4 Monitoring**

### **4.1 The QA Department**

Within the NMAC a QA department has been established under the NMAC Director. This department manages the QA activities through the DMAOs where the QA teams are based. The department is responsible to implement and co-ordinate all the external QA activities (accreditation, monitoring and sampling) in the Country. The department is also responsible for the following:

- a. The development of the National Mine Action Standards for conducting of all MA activities in Sri Lanka. These are derived from the International Mine Action Standards but are adapted for the local conditions. The section is also responsible for maintaining this document by continually reviewing and publishing amendments to it.
- b. The accreditation and licensing of all organisations and their sub-units wishing to undertake MA activities in Sri Lanka. The accreditation and licensing process forms an integral part of the Quality Management process and is comprehensively discussed in SLNMAS 02.
- c. Monitoring the tasking of the QA teams by the DMAO, in accordance with predetermined priorities.
- d. The monitoring of QA inspection results and reacting on those results that require rectification by MA organisations.

The QA Department is responsible to the NMAC Director for the co-ordination of all QA activities. It is however very important that good liaison and coordination exist between the Department, the DMAOs and the Operations Department.

### **4.2 Types of Monitoring**

The following are the types of QA monitoring conducted in Sri Lanka.

- a. Monitoring by the DMAO:
  - i. Programmed Monitoring. The programmed monitoring consists of programmed QA inspections conducted by the DMAO's QA teams at demining sites at identified critical times. The result of the QA inspection is discussed with the team leader, site supervisor or project manager of the demining organisation before departing from the clearance site. Programmed monitoring takes place on a daily basis, five days a week. Saturdays are set aside for administration purposes.

- ii. Special Evaluation. Special QA monitoring will be conducted by the Senior QA assistant of the DMAO QA Section as a result of consistently poor team QA reports or teams experiencing a high rate of accidents/incidents. These evaluations are usually longer than programmed monitoring and aim to pinpoint and correct the problems causing poor results or excessive accidents. Such evaluations will be conducted in an open and transparent manner, and should be undertaken in consultation with the management of the particular organisation.
- b. Monitoring by Demining Organisations. Senior supervisors of demining companies should regularly monitor/evaluate their own clearance operations to ensure that standards are being maintained and to rectify any problems or bad habits that may have crept in. As a guide, each team should be formally monitored at least every three months using the same marking sheets as used by the EMAO.
- c. Monitoring by NMAC Staff:
  - i. NMAC QA Department. As part of his normal co-ordination function, the Head of the QA department should regularly conduct both informal visits and formal monitoring of teams operating in the Country. As a guide, the Head of the QA department should aim to monitor all MA organisations at least annually.
  - ii. NMAC Operations. The EMAO operations staff should likewise regularly conduct both informal visits and formal monitoring of teams. These visits should be conducted in consultation with the Head of the Operations Department and the Head of the QA Department.

### **4.3 Monitoring of MRE activities**

Monitoring should be carried out at project and programme level and both internally (by the implementing organisation itself) and externally (by the NMAC). It should aim to ensure that all MRE meets applicable national and international standards, including the requirements of any accreditation granted to MRE operators. Monitoring should quality-assure MRE and the outputs of the project or programme in accordance with the plan. Evaluations should focus on the achievement of objectives, the impact of MRE, accountability, and lessons learned. The NMAC will conduct external monitoring while the MRE agency will be responsible to conduct internal monitoring and evaluations.

#### **4.3.1. Key issues to monitor**

At a minimum, monitoring should look at how well MRE is being implemented and whether the plan on which implementation is based is relevant to the needs of the affected communities.

The following issues should, therefore, be monitored:

- a. Effectiveness and efficiency of MRE delivery;
- b. Perception of MRE projects and programmes by at-risk communities;
- c. Resultant behavioural change;
- d. Geographical coverage;
- e. Reasons for risk-taking, new behaviours, adaptation to the hazard;



- f. Casualties; and
- g. Changes in the make-up of the target risk group.

In addition to assessing the effectiveness of MRE and progress in implementing plans, monitoring should track change in the mine/ERW hazard and environment. This involves monitoring changes to:

- a. initial assumptions regarding target groups;
- b. demographic and cultural changes affecting those most at risk;
- c. the mine/ERW hazard; and
- d. the broader political and socio-economic context that might influence people's ability to respond to MRE in an appropriate manner.

See Annex A for the MRE monitoring evaluation sheets.

#### **4.4 Monitoring of demining operations**

Monitoring is an essential part of the demining process. Together with accreditation and post-clearance inspections, it provides the NMAC with the necessary confidence that the demining organisation has cleared the land in accordance with its contractual obligations, and that the land is safe for its intended use.

To achieve this, monitoring shall examine the demining organisations capability (people, equipment and procedures) and observe how this capability is being applied. External monitoring complements the demining companies own internal quality management system. It verifies that the demining organisation's quality assurance procedures and internal quality control inspections are appropriate and are being applied – but it does not replace the demining organisations responsibility for ensuring the application of safe, effective and efficient operational procedures.

Monitoring will also be used, particularly at the beginning of a demining project as on-site verification, which is part of the accreditation of a demining organisation.

See Annex B for the evaluation sheets to be used by the QA teams during the monitoring of demining organisations.

##### **4.4.1. Programmed Monitoring**

The senior QA assistant and the QA teams at the DMAOs are to implement the programmed monitoring through QA inspections of mine/UXO clearance activities in an objective manner, based on the requirements laid down in the National Standards for Mine Action, using the SOP of each organisation as a point of reference.

QA inspections are undertaken at critical stages of the demining process for each area to be cleared. These critical stages are identified and marking sheets developed by the NMAC QA Department to be used by the QA Teams during their visits.

Monitoring Objectives. Monitoring of demining activities is done to:

- ❑ provide an appropriate level of confidence that areas are cleared in accordance with humanitarian standards,
- ❑ ensure that safe practices and correct procedures are being employed, identify and correct problems as early as possible to prevent bad habits from forming,

- ❑ ensure that training standards are maintained in field operations,
- ❑ assess new techniques for suitability and safety,
- ❑ provide regular feedback to management and field operators within mine/UXO clearance organisations, and
- ❑ assistance with fundraising by providing assurances to donors that their donations are being used effectively.

#### **4.5 The Monitoring Schedule**

The DMAO Senior QA Assistant shall allocate the QA teams on a weekly basis to the organisations and sites that they have to monitor the following week. The QA teams liaises with the project manager of each organisation that he has to visit the following week to determine the sites to inspect, when specific critical stages are reached on the sites and when the inspections will take place. The Senior QA Assistant is responsible for compiling the weekly QA program directly after this liaison has taken place and submitting the programme to the DMAO MA Officer before 12:00 on every Friday for approval. A copy of the approved program shall be provided to the NMAC QA Department on the same day. This program will indicate the sites to be visited by each QA team and what inspection will be conducted. QA teams should not be constrained by specific geographic boundaries, but should be rotated on a weekly basis between organisations to facilitate an objective monitoring process.

#### **4.6 Preparation**

Before a QA team can carry out an inspection, the following preparation is to be done by the team:

- ❑ Prepare a copy of the relevant QA marking sheets.
- ❑ Examine previous QA reports on the clearance team to be inspected and identify previous concerns and recommendations.
- ❑ The "Team History" section of the marking sheet is to be completed.
- ❑ Confirm aspects that are to be concentrated on during the inspection with the Senior QA Assistant.
- ❑ Confirm the MA team location and contact details.
- ❑ Obtain a copy of the specific organisation's SOP and ensure that the QA team members are informed of the drills and methods used by the organisation.
- ❑ Complete a Tasking and SOP study form with the information acquired during the preparation.

#### **4.7 Evaluation Sheets**

The QA team shall use the sheet appropriate to the particular activity being conducted on site and as determined during the liaison with the project manager of the MA organisation during the previous week and/or as the Senior QA Assistant determined. In terms of demining it is intended that each site will be inspected at various stages throughout the clearance process, particularly at the start and finish, but also if there is a hand over from one asset to another (i.e. mechanical to manual teams), etc. Following the completion of an inspection, the findings of the team are to be discussed with the team leader or a representative of the MA organisation. The MA team leader shall acknowledge the inspection and that the findings of the inspection have been discussed with him/her by signing the marking sheet. At the completion of the task, the QA team will compile a summary of the QA reports on the particular work site or village.

#### 4.8 Frequency of monitoring visits

QA inspections will take place on a daily basis, five days a week according to the program compiled by the senior QA assistants and approved by the MA Officers at regional level. As previously stated, QA visits should target the key stages within the MA activity's process, which will be determined in consultation with the senior QA assistant, the senior operations assistant and the MA organisation. Where training is being carried out, visits by the QA teams will be conducted frequently, depending upon the training schedule. Where MA teams have had an accident or two consecutive negative QA reports, they will be subjected to increased visits to ensure that proposed corrections are implemented. The following are guidelines determining the frequency of QA visits:

- ❑ Demining Organisations working on only one site: Minimum of one visit in 2 weeks.
- ❑ Demining Organisations working on two or more sites: Minimum of one visit per site in 2 weeks.
- ❑ MRE teams: minimum of one visit in 2 weeks.
- ❑ Every QA Team shall visit two sites per day.
- ❑ Where concerns exist about specific sites/teams a minimum of one visit per week shall be maintained until the situation is cleared up.
- ❑ The frequency of sampling (QC) tasks may influence the amount of visits to clearance sites per week.

#### 4.9 Duration of a QA monitoring visit

The duration of QA visit will vary, depending upon the particular aspect being monitored. The QA Team shall only stay as long at a site to complete his evaluation sheet and not longer.

#### 4.10 Conducting a QA monitoring visit

When a QA team arrives at a MA work site the QA team leader shall introduce the team to the person in charge of the work site and state the purpose of the visit. The senior QA assistant and the QA team leaders shall ensure that their teams adhere to the guidelines outlined as follows:

- ❑ During the QA visits, the QA team shall conduct the evaluation according to the evaluation sheet and as per instructions from QA management.
- ❑ Ensure that activities, drills and methods are in accordance with the company's SOP.
- ❑ The QA teams shall ensure that all safety aspects are being adhered to and that correct procedures are being employed. The QA Team should set a good example to the people at the work sites by adhering to procedures.
- ❑ The QA team should be firm and objective in their judgement. They shall remain impartial at all times and not let personal opinions, family ties or friendships affect their judgement and performance of their duties.
- ❑ QA Reports are to be discussed with the organisation's team leader and the senior technical advisor of the organisation if present. After discussing the report the organisation's team leader is to sign the QA Report acknowledging that he has been briefed.

- ❑ QA teams shall not make commitments in general to any individual or organisation on behalf of the DMAO or the NMAC.
- ❑ QA teams should always co-operate fully and impartially with all authorities and produce identification when requested to do so. Personnel are to ensure that authorities do not retain their ID cards or other identity documents without a receipt.
- ❑ QA teams are not to make changes to techniques taught on the organisations training courses or to procedures detailed in their SOP. Recommendations on changes may be made in QA Reports for action by the DMAO and NMAC.
- ❑ Any concerns not covered in the mark sheet or any suggestions concerning the MA activity should be noted and brought to the attention of the senior QA officer.
- ❑ QA teams shall not get involved in any argument with any member of the MA organisation during or after a QA visit.
- ❑ Major negative aspects from the report shall be discussed with the senior QA assistant and the MA officer as soon as possible after returning from the visit especially where safety aspects and poor clearance techniques are concerned.
- ❑ QA teams should also provide timely information to the DMAO and the NMAC of changes to security, weather and or other circumstances that may affect operations.
- ❑ QA teams should also report instances where MA activities are conducted to a high standard, in accordance with SOP.

#### **4.11 Suspension of demining due to safety**

During the QA visit the QA team should point out identified faults and ask the clearance team leader to correct it. The QA team leader shall only stop and suspend a clearance task on behalf of the DMAO/NMAC under the following circumstances:

- ❑ When there are no direct means of communication between the demining site and the organisation's Headquarters.
- ❑ When there is no medical support in accordance with the organisation's SOP.
- ❑ When civilians and animals are in the hazardous area and are an immediate threat to the clearance personnel.
- ❑ When people without PPE and/or animals are encroaching the minimum safety distance (in accordance with the organisation's SOP) from clearance personnel posing an immediate threat to the clearance personnel.
- ❑ When no proper supervision in accordance to the clearance organisation's SOP, exist.

#### **4.12 Signing of marking sheets**

After completion of the visit the QA team leader shall discuss the evaluation sheet with the MA organisation's leader at the work site. Any minor points shall be dealt with by the MA organisation's leader at the work site and are to be mutually agreed between him/her and the QA team leader. The MA organisation's leader at the work site shall sign the sheet and has the opportunity to write any comments about the visit in the space provided on the sheet.

#### **4.13 Control of marking sheet**

At the end of the day and on returning from the day's visits the QA team leader shall hand the completed marking sheets to the senior QA assistant. The completed marking sheet is the property of the NMAC. Important information and concerns are to be brought under the senior QA assistant's attention at the same time.

#### **4.14 Filing of the marking sheets**

The senior QA assistant is to open a QA dossier for each site in which the marking sheets are filed. When the site is completed the dossier is placed in the Task Dossier of the site before sending it to be entered into IMSMA. MRE monitoring reports to be submitted to the MRE officer of UNICEF based at the DMAO for review. The information in the QA dossier is to be used by the senior Operations assistant when evaluating the Completion Report when the Task Dossier is handed to him for evaluation.

#### **4.15 Reports and reporting**

##### **4.15.1. Weekly reports**

On completion of a week's evaluation, the senior QA assistant is responsible for compiling a weekly summary report, indicating the activities that have been carried out during the previous week. The report should provide a brief synopsis on the results of each site inspected, as well as recommendations for future inspections. This report is to be submitted to the MA Officer and the senior operations assistant at the DMAO by 08:00 on Tuesdays. On receiving this report the senior operations assistant is to read through it and identify any serious concerns, recurring negative reports and/or recommendations for changes in procedures. After the report is being discussed at the DMAO it is forwarded to the QA officer at the NMAC for information. The serious concerns and recurring negative reports shall be addressed in the following way:

- ❑ The senior operations assistant will outline a suggested course of action. The senior operations assistant shall inform the MA officer of the situation and the proposed corrections. Where serious/recurring negative reports provide sufficient reason to believe that the hazardous area is/has not been cleared to humanitarian standards, the MA officer may direct that an investigation be conducted by the senior QA assistant. The MA officer shall also inform the NMAC director if the situation. Based on the findings of this report, the NMAC director may direct that the area is re-cleared by the organisation concerned, or physically checked by another organisation.
- ❑ Where concerns and/or proposals for changes address changes in drills and methods, the proposed changes are to be discussed by the senior QA assistant and the senior operations assistant with the relevant organisation. If a compromise is reached and the organisation accepts the changes the SOP shall be amended by the organisation and all personnel are to be subjected to an appropriate period of retraining. A copy of the amendment signed by the MA Officer must be available in the organisation's SOP on the work site.
- ❑ Where changes in equipment are recommended, the NMAC director will discuss this aspect with the MA organisation. If necessary the NMAC director is to request details regarding the equipment's specifications. If concerns still exist the NMAC director may request the organisation to submit the equipment for tests by the NMAC. Where there are justifiable safety concerns, operations may be suspended until the equipment is proven to be suitable, or the equipment is replaced by more acceptable equipment.

##### **4.15.2. Monthly reports**

The senior QA assistant is responsible for submitting a monthly summary report. The report shall be submitted to the MA officer at the DMAO before or on the 4<sup>th</sup> day of each

month. The MA officer shall approve the report and forward it to the NMAC director. The following aspects should be discussed in the report:

- ❑ Summary of evaluations conducted during the month.
- ❑ Serious concerns identified.
- ❑ Corrections initiated on work sites during evaluations.
- ❑ Suggestions in regard to amendments to organisation's SOP.
- ❑ Suggestions in regard to amendments to the SLNMAS.
- ❑ Lessons learned and recommendations.

#### **4.16 Records**

The NMAC shall maintain a complete set of written (originals) and electronic records of the QA visits conducted by the QA teams, QA Section or any other authorised institution. The records and reports will remain the property of the NMAC. Copies of the various reports may be given to the respective MA organisations on request.

## **5 Sampling procedure for the inspection of cleared land**

Post clearance inspection of cleared land shall take place in Sri Lanka by conducting a sampling process. The sampling shall be conducted by the QA teams situated at the various regional mine action offices.

### **5.1 Principles of the post-clearance inspection and sampling process in Sri Lanka**

The following principles shall be taken in consideration when sampling is to be done:

- a. Only cleared land where mines and/or ERW were found will be submitted to sampling.
- b. The senior operations assistant shall decide if sampling of cleared land needs to be conducted after scrutinizing the completion survey report of the cleared land.
- c. The minimum total of land to be sampled shall be 10 percent of the area cleared. The sample area shall be divided into small sampling units of 1m<sup>2</sup> that will be selected at random in the cleared area. Depending on the size of the cleared land a maximum of 20 sampling units may be grouped together.
- d. The area to be sampled shall be inspected to the depth stated in the original task dossier issued for clearance. If no clearance depth is mentioned the minimum depth shall be 15 cm in the areas where manual clearance techniques were utilised and 20 cm in the areas where demining machines were utilised.
- e. To save time and QA resources sampling of cleared land may already commence during the QA monitoring visits depending on if mines/ERW are found. The sizes and position of the lots sampled during the QA visits shall be recorded and the remainder required shall then be done during the final QC inspection.
- f. The post-clearance inspection and sampling should be completed within seven working days after the completion survey report is submitted to the DMAO.

- g. The same clearance technique should be utilised by the QA team as the technique utilised by the demining agency in the case of manual demining. In the case where demining machines were utilised depth measurements shall be conducted at random covering the area cleared.
- h. During the post-clearance inspection the survey and recording results of the area cleared shall also be inspected.

## 5.2 Acceptance criteria

The land submitted for sampling shall only be accepted as “cleared” if all the sampling units are found to be free of mines or ERW including unexploded sub-munitions down to the depth specified in the task dossier. Where any sample in the lot is found to contain one or more mines or ERW, this will constitute a 'critical non-conformity', and the land submitted for inspection shall be declared to have failed the inspection.

The following criteria will determine the acceptance or non-acceptance of cleared land:

- a. Where the full excavation and rake excavation manual demining techniques were used and any mines or ERW including unexploded sub-munitions to the depth of 15 cm are found the area submitted for inspection will not be accepted as cleared. This shall constitute a 'critical non-conformity' and the land submitted for inspection shall be declared to have failed the inspection.
- b. Where manual demining utilising metal detectors has been conducted to clear the land and any mines or ERW including unexploded sub-munitions to the depth of 15 cm are found the area submitted for inspection will not be accepted as cleared. This shall constitute a 'critical non-conformity' and the land submitted for inspection shall be declared to have failed the inspection.
- c. Where manual demining utilising metal detectors has been conducted to clear the land and one or more pieces of scrap ferrous metal, with a weight equal to or greater than the ferrous metal content of the mine with the least ferrous metal content (as determined by technical survey or risk assessment for the site), in any 1m<sup>2</sup> sample unit shall be considered as non-conforming. The identification of five or more separate sample units, within the lands submitted for inspection, each found to contain pieces of scrap ferrous metal equal to or greater than the ferrous metal content of the mine with the least ferrous metal content, shall be considered as a 'critical non-conformity' and the land submitted for inspection shall be declared to have failed the inspection.
- d. Where mechanical excavation has been conducted to clear the land and any mines or ERW including unexploded sub-munitions to the minimum depth of 20 cm are found or to a deeper depth stated in the task dossier the area submitted for inspection will not be accepted as cleared. This shall constitute a 'critical non-conformity' and the land submitted for inspection shall be declared to have failed the inspection.
- e. Where surface clearance during BAC was conducted and any ERW are found on the surface or protruding from the ground the area submitted for inspection shall not be accepted as cleared. This shall constitute a 'critical non-conformity' and the land submitted for inspection shall be declared to have failed the inspection.
- f. Where sub-surface clearance during BAC was conducted and any ERW are found on the surface or buried to the depth as specified in the task dossier the area submitted for inspection shall not be accepted as cleared. This shall constitute a 'critical non-conformity' and the land submitted for inspection shall be declared to have failed the inspection.

### **5.3 Preventative and corrective actions**

The demining organisation shall investigate every critical non-conformity, shall provide the NMAC, through the DMAO, with reasons for each critical non-conformity, and shall provide a programme of preventative action followed by corrective action. The NMAC should agree on the preventative and corrective action to be taken on the area that has failed an inspection.

The demining organisation shall be required to re-clear the failed area as part of the corrective action if the critical non-conformity is a mine or ERW or if the procedures used by the demining organisation indicate a less than required quality of clearance.

If an area has been re-cleared by the demining organisation and fails re-inspection, the NMAC 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. Alternatively, a different organisation may be asked to re-clear the land. The NMAC may then decide to withdraw the accreditation for the demining team (or organisation) that carried out the initial clearance and re-clearance for shorter or longer periods while the requirements for more extensive corrective action are identified and addressed.

If no acceptable reason is given for a critical non-conformity, either by the demining organisation or by the DMAO, the NMAC should require the land to be marked and fenced until the reasons for the non-conformity can be established or until a more reliable clearance effort can be undertaken.

### **5.4 Cost of post-clearance inspection**

There is always a cost associated with re-clearance and re-inspection of re-cleared land. The cost issues should be clearly articulated in the clearance agreement between NMAC and the clearance organization. The NMAA may ask the clearance organization to cover the costs of re-clearance and re-inspection as appropriate.

### **5.5 Record of inspections and results**

The sample plan, the methods used for inspection, and the results should be recorded by the QA team leader, including the location, depth, types of hazard and other non-conformities as specified in this standard such as metal fragments or explosive residue. Details of all corrective action shall also be recorded. All records shall be passed to the NMAC for inclusion in the completion report for the cleared land. Once the cleared land has been handed over the NMAC shall be the custodian of all completion reports, handover certificates and supporting information.

### **5.6 Safety during post-clearance inspection and sampling**

The QA team shall first conduct the physical inspection of the cleared land by sampling in accordance with the sampling plan compiled by the QA team leader. During the physical sampling activities the sampling team shall adhere to the safety rules and regulations specified for that technique of clearance. PPE shall always be worn during sampling activities.

The inspection of the survey and recording of the cleared land shall be conducted after the sampling is completed and only if the cleared land is accepted in accordance with the criteria. It is not necessary to wear PPE during this activity and the accurate recording of coordinates is of very high importance.



## **5.7 Recording of post-clearance inspection and sampling**

A post-clearance inspection report needs to be completed by the QA team leader and submitted to the senior operations assistant attached to the demining organisation's completed completion survey report of the cleared area if the land is accepted as cleared. For the post-clearance inspection report please see Annex B.

A detailed sketch of the cleared area indicating the location of the sampled units shall be compiled and attached to the report. Items found in every sampled unit shall be indicated and listed.

The reason for any non-conformity shall be fully described and where the land submitted for inspection fails the inspection the reasons for failure shall also be listed in full.

## **6 Summary**

It is important to keep the quality assurance process in perspective and apply it in a judicious manner. In the MA process QA is a continuous process accomplished through the quality control of training, procedures and supervision. Additional quality assurance to provide the levels of control is required only when the existing process has limitations or obvious shortcomings. The quality assurance process must enhance the overall MA activities and especially the demining process and not slow it down unnecessarily or create financial and resource barriers. Establishing a quality assurance system that imposes serious constraints to productivity does not constitute an effective response to dealing with the problem of mine/UXO contamination. The requirement to achieve the maximum degree of safety must be balanced against the need to keep the population of Sri Lanka safe from the threat of mines/ERW, to remove the threat posed by mines/ERW and to return land to productive use. This requires a common sense approach and a degree of risk management by responsible MA organisations.

## **Annex A**

### **MRE QA Monitoring Marking Sheets**

Marking sheets to be compiled

## Annex B

### Demining QA Monitoring Marking Sheets

#### QUALITY ASSURANCE EVALUATION FORM: COMMAND AND CONTROL

Date		District	
QA Team Leader		DS Division	
Task ID Number		GN Division	
Organization		Nearest Village	
Org Team Leader's Name		Site Name	
Team Name/Number		IMSMA ID No.	
		BM Coordinates	

#### Briefing

Was a site briefing done?

Safe areas Yes  No

Dangerous area Yes  No

Work remaining \_\_\_\_\_%

Total AP mines this week \_\_\_\_\_

Total AT mines this week \_\_\_\_\_

Total ERW this week \_\_\_\_\_

Total deminers on site \_\_\_\_\_

Marking system Yes  No

Site History Yes  No

Area cleared to date \_\_\_\_\_m<sup>2</sup>

Total AP to date \_\_\_\_\_

Total AT to date \_\_\_\_\_

Total ERW to date \_\_\_\_\_

Machines on site \_\_\_\_\_

Clearance method: REDS  Full excavation  Metal Detector  Mechanical  BAC

Is there an understandable sketch map on site? Yes  No

Is the sketch map up to date? Yes  No

When the map was last updated? \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

Is a visitor's log maintained? Yes  No

Is a copy of the Current SOP available on site? Yes  No

Is a clearance plan on site? Yes  No

Is a copy of the task dossier on site? Yes  No

#### Site layout

Is the site layout as per SOP? Yes  No

Are all minimum safety distances as per SOP? Yes  No

Are all areas clearly marked as per SOP? Yes  No

#### Command and control

Does the Supervisor /Site Operations Officer know the location of all Mine/ERW clearance personnel? Yes  No

Inspect the teams and patrol the site as per SOP? Yes  No

Have communications with all teams/sections? Yes  No

Are the teams organised in the field as per SOP? Yes  No

Was the Team Leader at the minefield at all times? Yes  No

Was the Team Leader's control and location as per SOP? Yes  No

Check attendance sheet and compare with personnel on the ground. Do they conform? Yes  No

Does the Team Leader fix faults as he identifies them? Yes  No

Are the teams being rested as per SOP? Yes  No

Does the Team Leader know the location of the medic at all times? Yes  No

Does the Team Leader know the CASAVAC drill as per SOP? Yes  No

#### Internal Quality Assurance

Are internal QA procedures as per SOP? Yes  No

Were any non-conformity found during internal QA checks at this site? Yes  No

Are these QA checks logged and a file kept on site? Yes  No

Are internal QA checks recorded or marked in any way on the ground? Yes  No

**Medical**

Is the following in accordance with the organisation SOP?

Qualified Medic	Yes <input type="checkbox"/> No <input type="checkbox"/>	Ambulance Present	Yes <input type="checkbox"/> No <input type="checkbox"/>
Ambulance parked correct	Yes <input type="checkbox"/> No <input type="checkbox"/>	Stretcher	Yes <input type="checkbox"/> No <input type="checkbox"/>
Ambulance Driver	Yes <input type="checkbox"/> No <input type="checkbox"/>	Point within 5 min from site	Yes <input type="checkbox"/> No <input type="checkbox"/>
Contents of Med. Kit	Yes <input type="checkbox"/> No <input type="checkbox"/>	Marked HLS	Yes <input type="checkbox"/> No <input type="checkbox"/>
HLS Appropriate	Yes <input type="checkbox"/> No <input type="checkbox"/>	Medic Keep all Person's Blood Group	Yes <input type="checkbox"/> No <input type="checkbox"/>
Casevac plan	Yes <input type="checkbox"/> No <input type="checkbox"/>	Medic knows casevac plan	Yes <input type="checkbox"/> No <input type="checkbox"/>
Visitors included in plan	Yes <input type="checkbox"/> No <input type="checkbox"/>		

**Communications**

Is there adequate communication with the Org HQ? Yes  No

Type of communications to Org HQ? \_\_\_\_\_

Are the communications frequently maintained? Yes  No

Did you test the communications to the Org HQ? Yes  No

Radio communications on site? Yes  No

Does the radio communications work? Yes  No

**QA Assessment** Good  Satisfactory  Poor

**Comments and recommendations**

**Team Leader**

Were you debriefed after the QA inspection? Yes  No

**Team Leader's comments**

QA Team Leader		QA Team	
Signature		Date	
Clearance TL		Clearance T Name	
Signature		Date	

**QUALITY ASSURANCE EVALUATION FORM: SETTING UP**

Date		District	
QA Team Leader		DS Division	
Task ID Number		GN Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
		IMSMA ID No.	
Team Name/Number		BM Coordinates	

**Planning**

- Was a reconnaissance done beforehand? Yes  No
- Is a Clearance Plan compiled and available? Yes  No
- Has contact established with the local community? Yes  No
- Is the clearance site clearly identified and known to the Leaders? Yes  No
- Is the site and clearance plan in accordance with DMAO Clearance Plan? Yes  No
- Were detailed orders given to the Team members regarding the task? Yes  No

**Site Layout**

- Is there a current SOP on site? Yes  No

- Is the layout of work site in accordance with the organisation SOP?

- |                     |  |                        |  |
|---------------------|--|------------------------|--|
| Control Point       | Yes <input type="checkbox"/> No <input type="checkbox"/> | Access Routes          | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Vehicle Park        | Yes <input type="checkbox"/> No <input type="checkbox"/> | Stores & Equipment     | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Medical Area        | Yes <input type="checkbox"/> No <input type="checkbox"/> | Explosives Area        | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Rest Areas          | Yes <input type="checkbox"/> No <input type="checkbox"/> | Metal Collecting Point | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Mine/UXO Debris Pit | Yes <input type="checkbox"/> No <input type="checkbox"/> | Latrines               | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Demolition Area     | Yes <input type="checkbox"/> No <input type="checkbox"/> | Sentry Points          | Yes <input type="checkbox"/> No <input type="checkbox"/> |

- Are all site reference points in position and clearly visible?

- |                   |  |                 |  |
|-------------------|--|-----------------|--|
| Start Point       | Yes <input type="checkbox"/> No <input type="checkbox"/> | Datum/Base Line | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Safe Lane         | Yes <input type="checkbox"/> No <input type="checkbox"/> | Start Line      | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Start Point       | Yes <input type="checkbox"/> No <input type="checkbox"/> | Clearance Lane  | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Intermediate Line | Yes <input type="checkbox"/> No <input type="checkbox"/> | Benchmark       | Yes <input type="checkbox"/> No <input type="checkbox"/> |

- Are minimum safety distances adhered to as laid down in organisations SOP?

- |                 |  |                    |  |
|-----------------|--|--------------------|--|
| Working Lanes   | Yes <input type="checkbox"/> No <input type="checkbox"/> | Pers. in same Lane | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Explosives area | Yes <input type="checkbox"/> No <input type="checkbox"/> | Vehicle Park       | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Briefing Area   | Yes <input type="checkbox"/> No <input type="checkbox"/> |                    |  |

- Are the different areas marked in accordance with the SOP? Yes  No

- Are the explosives on site stored as per organisation SOP? Yes  No

- Are stores and equipment in a working condition?

- |                  |  |                |  |
|------------------|--|----------------|--|
| Metal Detectors  | Yes <input type="checkbox"/> No <input type="checkbox"/> | Base sticks    | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Excavating Equip | Yes <input type="checkbox"/> No <input type="checkbox"/> | Marking Stores | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Demining apron   | Yes <input type="checkbox"/> No <input type="checkbox"/> | Helmet/Visor   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Heavy rakes      | Yes <input type="checkbox"/> No <input type="checkbox"/> | Light rakes    | Yes <input type="checkbox"/> No <input type="checkbox"/> |

- Is the logistical support for mechanical means adequate? Yes  No

**Briefing**

- Was a site briefing done? Yes  No

- Visitors Log? Yes  No

- Did the briefing cover the following:

Safe areas	Yes <input type="checkbox"/> No <input type="checkbox"/>	Marking system	Yes <input type="checkbox"/> No <input type="checkbox"/>
Dangerous area	Yes <input type="checkbox"/> No <input type="checkbox"/>	Site history	Yes <input type="checkbox"/> No <input type="checkbox"/>

Work remaining \_\_\_\_\_% Area cleared to date \_\_\_\_\_m<sup>2</sup>

Total AP mines this week \_\_\_\_\_ Total AP to date \_\_\_\_\_

Total AT mines this week \_\_\_\_\_ Total AT to date \_\_\_\_\_

Total ERW this week \_\_\_\_\_ Total ERW to date \_\_\_\_\_

Total deminers on site \_\_\_\_\_ Machines on site \_\_\_\_\_

Clearance method: REDS  Full excavation  Metal Detector  Mechanical  BAC

- Is there an understandable sketch map on site? Yes  No

- Is the sketch map up to date? Yes  No

- When the map was last updated? \_\_\_\_/\_\_\_\_/\_\_\_\_

- Is a visitor's log maintained? Yes  No

- Is a copy of the Current SOP available on site? Yes  No

- Is a clearance plan on site? Yes  No

Is a copy of the task dossier on site? Yes  No

**Medical**

Is the following in accordance with the organisation SOP?

Qualified Medic	Yes <input type="checkbox"/> No <input type="checkbox"/>	Ambulance Present	Yes <input type="checkbox"/> No <input type="checkbox"/>
Ambulance parked correct	Yes <input type="checkbox"/> No <input type="checkbox"/>	Stretcher	Yes <input type="checkbox"/> No <input type="checkbox"/>
Ambulance Driver	Yes <input type="checkbox"/> No <input type="checkbox"/>	Point within 5 min from site	Yes <input type="checkbox"/> No <input type="checkbox"/>
Contents of Med. Kit	Yes <input type="checkbox"/> No <input type="checkbox"/>	Marked HLS	Yes <input type="checkbox"/> No <input type="checkbox"/>
HLS Appropriate	Yes <input type="checkbox"/> No <input type="checkbox"/>	Medic Keep all Person's Blood Group	Yes <input type="checkbox"/> No <input type="checkbox"/>
Casevac plan	Yes <input type="checkbox"/> No <input type="checkbox"/>	Medic knows casevac plan	Yes <input type="checkbox"/> No <input type="checkbox"/>
Visitors included in plan	Yes <input type="checkbox"/> No <input type="checkbox"/>		

**Communications**

Is there adequate communication with the Org HQ? Yes  No

Type of communications to Org HQ? \_\_\_\_\_

Are the communications frequently maintained? Yes  No

Did you test the communications to the Org HQ? Yes  No

Radio communications on site? Yes  No

Does the radio communications work? Yes  No

**QA Assessment** Good  Satisfactory  Poor

**Comments and recommendations**

**Clearance team leader**

Were you debriefed after the QA inspection? Yes  No

**Clearance Team leaders comments**

QA Team Leader		QA Team	
Signature		Date	
Demining Team Leader		Team Name	
Signature		Date	

**QUALITY ASSURANCE EVALUATION FORM: TECHNICAL SURVEY**

Date		District	
QA Team Leader		DS Division	
Task ID Number		GN Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
Team Name/Number		BM Coordinates	

Briefing

- Was a site briefing done? Yes  No   
 Is a visitors log maintained? Yes  No   
 Is a copy of the EMAO SOP available on site? Yes  No

Survey and Area Reduction

- Is a Reference point identified and recorded? Yes  No   
 Is the confirmed hazardous area identified on the ground and in accordance with the Task Dossier issued by the DMAO? Yes  No   
 Is the setting up as for the method used in accordance with the SOP? Yes  No   
 What demining method is used to open-up exploratory lanes/for area reduction?

Manual

- Metal Detectors   
 Full Excavation   
 REDS

Mechanical

- Mini Flail   
 Roller   
 Mechanical rake   
 Mechanical Excavation

What task should the clearance team conduct according to the task dossier when the technical survey is completed?

- Clearance  Mark and Fence

- Are all mines /ERW found recorded? Yes  No   
 Are the mine lines and/or mine laying pattern identified? Yes  No   
 Is the outer perimeter of the DHA precisely identified? Yes  No   
 Is a Datum Point identified and recorded at a safe distance from the outer perimeter? Yes  No   
 Are the various Turning Points identified and recorded at a safe distance from the outer perimeter? Yes  No   
 Are the Datum Point and Turning Points properly fixed for future identification? Yes  No

- Is the boundary of the DHA recorded as per SOP? Yes  No   
 Does the survey map show the following?  
 Types of mines found? Yes  No   
 Location of mines found? Yes  No   
 Unknown areas shown? Yes  No   
 DHAs shown? Yes  No   
 Safe areas shown? Yes  No   
 Cleared areas shown? Yes  No   
 Bearings and coordinates properly identified and correct? Yes  No   
 Is Technical Survey Report completed? Yes  No   
 Is the DHA report properly completed? Yes  No   
 Is the DHA fenced in accordance with the SLNMAS? Yes  No

Medical

Is the following in accordance with the organisation SOP?

- |                           |  |                                     |  |
|---------------------------|--|-------------------------------------|--|
| Qualified Medic           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Ambulance Present                   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance parked correct  | Yes <input type="checkbox"/> No <input type="checkbox"/> | Stretcher                           | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance Driver          | Yes <input type="checkbox"/> No <input type="checkbox"/> | Point within 5 min from site        | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Contents of Med. Kit      | Yes <input type="checkbox"/> No <input type="checkbox"/> | Marked HLS                          | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| HLS Appropriate           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic Keep all Person's Blood Group | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Casevac plan              | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic knows casevac plan            | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Visitors included in plan | Yes <input type="checkbox"/> No <input type="checkbox"/> |                                     |  |

Communications

- Is there adequate communication with the Org HQ? Yes  No   
 Type of communications to Org HQ?  
 Are the communications frequently maintained? Yes  No   
 Did you test the communications to the Org HQ? Yes  No

Radio communications on site?

Yes  No

Does the radio communications work?

Yes  No

**QA Assessment**

Good

Satisfactory

Poor

**Comments and recommendations**

**Clearance team leader**

Were you debriefed after the QA inspection?

Yes  No

**Clearance Team leaders comments**

QA Team Leader		QA Team	
Signature		Date	
Clearance Team Leader		Team Name	
Signature		Date	



**QUALITY ASSURANCE EVALUATION FORM: DEMOLITIONS**

Date		District	
QA Team Leader		DS Division	
Task ID Number		GS Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
Team Name/Number		BM coordinates	

Briefing

- Was a site briefing done? Yes  No
- Is a visitor's log maintained? Yes  No
- Is a copy of the organisation's SOP available on site? Yes  No
- Was a safety briefing done for all participants to the demolition? Yes  No

Method of demolition: Explosives  Burning

Site layout

- Are the demolitions being carried out in situ? Yes  No
- If so is the site layout as per SOP? Yes  No
- Are the demolitions being carried out on a demolition range? Yes  No
- If so is the range secured as per SOP? Yes  No
- Are sufficient sentries posted as per SOP? Yes  No
- Is the safety distance identified and safe areas indicated? Yes  No
- Is there a firing point designated as per SOP? Yes  No

Co-ordination and control/ General Aspects

- Are the following organisations informed of the demolition?
  - Nearby Demining Teams Yes  No
  - Org HQ Yes  No
  - Nearest Military Unit Yes  No
- Is the supervisor/EOD operator qualified to carry out the demolition? Yes  No

Demolition bmo Explosives

- Are the following aspects conducted as per SOP?
  - Selection and clearance of the demolition Yes  No
  - Handling of explosives Yes  No
  - Testing of safety fuse and electrical cable Yes  No
  - Preparation and placement of all explosive charges Yes  No
  - Maintaining safety regulations Yes  No
  - Warn local authorities Yes  No
  - Control over firing Yes  No
- Are the explosives stored on site as per SOP? Yes  No
- Are used explosives properly recorded? Yes  No
- Are the following actions carried out as per SOP?
  - Target identity Yes  No
  - Plan cordons, brief sentries, warn local people Yes  No
  - Prepare demolition charges Yes  No
  - Establish safety cordon Yes  No
  - Place charges Yes  No
  - Warn sentries and locals of impending demolition Yes  No
  - Observation of area Yes  No
  - Initiation of charge if areas all clear Yes  No
  - Observation of falling debris Yes  No
  - Checking result of demolition Yes  No
  - Lifting of cordon Yes  No
- Are charges placed as per SOP? Yes  No
- Is electrical initiation used? Yes  No
- Are sandbags used for protective works? Yes  No
- Are the following points regarding SAFETY as per SOP?
  - People to prepare charges Yes  No
  - Smoking on range Yes  No
  - Explosive control Yes  No
  - Misfire drills Yes  No
  - Keeping explosives in vehicle Yes  No
  - Handling detonators Yes  No
  - Detonating cord Yes  No

- Safety fuse Yes  No
- Electrical cables Yes  No
- Minimum danger areas Yes  No
- Declaration of ALL CLEAR Yes  No

**Demolition bmo Burning**

- Is the burning point identified and is it safe? Yes  No
- Clear open area and hard surface? Yes  No
- Burning pit minimum of 20cm deep? Yes  No
- Safety distances between mine burning pits minimum of 5m apart? Yes  No
- Area around burning pits to minimum of 10m cleared from undergrowth? Yes  No
- Burning material sawdust, dry grass, paddy dust, etc soaked in liquid fuel? Yes  No
- Burning material levelled out in bottom of burning pit for even spread of mines or detonator/booster within the pit? Yes  No
- Mines are disarmed/defused? Yes  No
- Mines are spread evenly on the burning material? Yes  No
- Mines and detonators not burned at the same time? Yes  No
- Only plastic or wooden mines? Yes  No
- Set out sentries or cordon around the area before burning starts? Yes  No
- Notify everyone before first pit is lit? Yes  No
- "Fire starter" light fire from distance with long stick with piece of cloth soaked in liquid fuel and set alight to start fires? Yes  No
- "Fire starter" will light mine burning pits one after the other? Yes  No
- "Fire starter" withdraw to safe area, min 25m, and observe burning process? Yes  No
- When burning completed the team leader inspect each pit to ensure that all mines have completely burned out? Yes  No
- If all the mine bodies have not burned out, the fire should be rebuild and burned again? Yes  No
- No more than 50 AP mines in one pit for burning? Yes  No
- Mine fuzes to be burned after the mine burning is completed? Yes  No
- If mine fuzes are burned at the same time as mines the fuze burning pit needs to be 25m from any of the mines burning pit? Yes  No

**Medical**

Is the following in accordance with the organisation SOP?

- |                           |  |                                     |  |
|---------------------------|--|-------------------------------------|--|
| Qualified Medic           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Ambulance Present                   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance parked correct  | Yes <input type="checkbox"/> No <input type="checkbox"/> | Stretcher                           | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance Driver          | Yes <input type="checkbox"/> No <input type="checkbox"/> | Point within 5 min from site        | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Contents of Med. Kit      | Yes <input type="checkbox"/> No <input type="checkbox"/> | Marked HLS                          | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| HLS Appropriate           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic Keep all Person's Blood Group | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Casevac plan              | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic knows casevac plan            | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Visitors included in plan | Yes <input type="checkbox"/> No <input type="checkbox"/> |                                     |  |

**Communications**

- Is there adequate communication with the Org HQ? Yes  No
- Type of communications to Org HQ? \_\_\_\_\_
- Are the communications frequently maintained? Yes  No
- Did you test the communications to the Org HQ? Yes  No
- Radio communications on site? Yes  No
- Does the radio communications work? Yes  No

**QA Assessment**                      Good                       Satisfactory                       Poor

**Comments and recommendations**

**Clearance team leader**

Were you debriefed after the QA inspection?

Yes  No

**Clearance Team leaders comments**

--

QA Team Leader		QA Team	
Signature		Date	
Clearance Team Leader		Team Name	
Signature		Date	

**QUALITY ASSURANCE EVALUATION FORM: MINE DETECTING DOGS**

Date		District	
QA Team Leader		DS Division	
Task ID Number		GS Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
Team Name/Number		BM coordinates	

**Terrain and Weather Conditions**

Ground		Weather		Vegetation							
Soft	<input type="checkbox"/>	Flat	<input type="checkbox"/>	Clear	<input type="checkbox"/>	Cold	<input type="checkbox"/>	None	<input type="checkbox"/>	Heavy	<input type="checkbox"/>
Medium	<input type="checkbox"/>	Uneven	<input type="checkbox"/>	Cloudy	<input type="checkbox"/>	Mild	<input type="checkbox"/>	Burnt	<input type="checkbox"/>	Medium	<input type="checkbox"/>
Hard	<input type="checkbox"/>	Hillside	<input type="checkbox"/>	Raining	<input type="checkbox"/>	Warm	<input type="checkbox"/>	Grass	<input type="checkbox"/>	Light	<input type="checkbox"/>
Wet	<input type="checkbox"/>	Open	<input type="checkbox"/>	Snow	<input type="checkbox"/>	Temp.		Bush	<input type="checkbox"/>	Grazing	<input type="checkbox"/>
Dry	<input type="checkbox"/>	Confined	<input type="checkbox"/>	Windy	<input type="checkbox"/>			Crops	<input type="checkbox"/>	Agricultural	<input type="checkbox"/>
Rocky	<input type="checkbox"/>	Sand	<input type="checkbox"/>	Calm	<input type="checkbox"/>			Forest	<input type="checkbox"/>		
Road	<input type="checkbox"/>	Residential	<input type="checkbox"/>	Wind speed	_____						
Canal	<input type="checkbox"/>			Noise level	_____						

**Briefing**

- Is a site briefing done? Yes  No
- Is a visitor's log available? Yes  No
- Is a copy of the Org SOP available on site? Yes  No

**Site layout**

- Is the site layout as per SOP for use of MDD? Yes  No

**Training**

- Have the dogs been evaluated and accredited by the NMAC? Yes  No
- Are the dogs periodically retrained and evaluated as per SOP? Yes  No
- Is a record of retraining maintained? Yes  No
- Date of last recorded training. \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_
- Date of last internal evaluation. \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_
- Date of the NMAC accreditation. \_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_

**Preparation for Work and Clearance Operations**

- Are pre-deployment exercises performed before commencing with search? Yes  No
- Is there adequate water available for the dogs? Yes  No
- Is there a shaded area available for the MDD's? Yes  No
- Are the dogs being utilised according to the organisations SOP? Yes  No
- Is instrumentation available for measuring weather conditions on the site, i.e. wind and temperature? Yes  No
- Are the dogs search patterns as detailed in the organisations SOP? Yes  No
- Do the dogs disturb the ground before indicating? Yes  No
- Do the handlers ensure that a thorough search is conducted? Yes  No
- Do the dogs indicate a find according to the organisations SOP? Yes  No
- Are all indications marked according to SOP? Yes  No
- Taking safety into account, is a reward system for the dogs utilised? Yes  No
- Is Internal QC carried out and logged? Yes  No
- Is Clearance conducted in accordance the Clearance plan? Yes  No

**Medical Aspects**

- Do the dogs appear to be well cared for and in good condition? Yes  No
- Are the dogs travelling arrangements as per SOP? Yes  No
- Is a MDD medical bag on site? Yes  No

**Equipment**

- Are the dogs drinking bowls clean and serviceable? Yes  No
- Are the dog's leashes in good condition? Yes  No
- Is the choke chain/collar in good condition? Yes  No

**Medical**

Is the following in accordance with the organisation SOP?

- |                           |  |                                     |  |
|---------------------------|--|-------------------------------------|--|
| Qualified Medic           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Ambulance Present                   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance parked correct  | Yes <input type="checkbox"/> No <input type="checkbox"/> | Stretcher                           | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance Driver          | Yes <input type="checkbox"/> No <input type="checkbox"/> | Point within 5 min from site        | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Contents of Med. Kit      | Yes <input type="checkbox"/> No <input type="checkbox"/> | Marked HLS                          | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| HLS Appropriate           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic Keep all Person's Blood Group | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Casevac plan              | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic knows casevac plan            | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Visitors included in plan | Yes <input type="checkbox"/> No <input type="checkbox"/> |                                     |  |

**Communications**

- Is there adequate communication with the Org HQ? Yes  No
- Type of communications to Org HQ? \_\_\_\_\_
- Are the communications frequently maintained? Yes  No
- Did you test the communications to the Org HQ? Yes  No
- Radio communications on site? Yes  No
- Does the radio communications work? Yes  No

**QA Assessment**

- Good  Satisfactory  Poor

**Comments and recommendations**

**Clearance team leader**

Were you debriefed after the QA inspection? Yes  No

**Clearance Team leaders comments**

QA Team Leader		QA Team	
Signature		Date	
Clearance Team Leader		Team Name	
Signature		Date	

**QUALITY ASSURANCE EVALUATION FORM: COMPLETION OF CLEARANCE TASK**

Date		District	
QA Team Leader		DS Division	
Task ID Number		GS Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
Team Name/Number		Grid reference	

Clearance methods used on the area:

Mechanical	<input type="checkbox"/>	Manual	<input type="checkbox"/>
MDD	<input type="checkbox"/>	BAC	<input type="checkbox"/>

Task Starting Date	
Task Completion Date	

**Marking and Recording**

- Is the cleared area properly recorded and mapped? Yes  No
- Are all items found by the team properly recorded? Yes  No
- Are the reference points easy identifiable? Yes  No
- Is the benchmark permanently fixed and recorded? Yes  No
- Is all marking and fencing material removed? Yes  No
- Metal pit, Mine/UXO debris pit and latrines closed up? Yes  No
- Is the Completion Report completed properly by the organisation? Yes  No
- Is the task dossier present? Yes  No
- Is the following included in the task dossier?
  - Al the Info received from the DMAO as stated on the control sheet. Yes  No
  - Internal QC log. Yes  No
  - Visitors log. Yes  No

**Hand Over**

- Is the local MRE team informed that the task is completed? Yes  No
- Did the MRE Officer inform the owner of the area/villagers? Yes  No
- Did the MRE Officer inform the local village head? Yes  No

Name of MRE Officer: \_\_\_\_\_ Organisation: \_\_\_\_\_

**QA Assessment**

Good  Satisfactory  Poor

**Comments and recommendations**

**Clearance team leader**

Were you debriefed after the QA inspection? Yes  No

**Comments by Clearance Team leader**

**Comments by the Clearance Programme Officer/ TA**

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QA Team Leader		QA Team	
Signature		Date	
Team Leader		Team Name	
Signature		Date	
Org TA		Org Name	
Signature		Date	

**QUALITY ASSURANCE EVALUATION FORM: MANUAL CLEARANCE**

Date		District	
QA Team Leader		DS Division	
Task ID Number		GS Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
Team Name/Number		BM Coordinates	

Terrain and Weather Conditions

Ground		Weather		Vegetation							
Soft	<input type="checkbox"/>	Flat	<input type="checkbox"/>	Clear	<input type="checkbox"/>	Cold	<input type="checkbox"/>	None	<input type="checkbox"/>	Heavy	<input type="checkbox"/>
Medium	<input type="checkbox"/>	Uneven	<input type="checkbox"/>	Cloudy	<input type="checkbox"/>	Mild	<input type="checkbox"/>	Burnt	<input type="checkbox"/>	Medium	<input type="checkbox"/>
Hard	<input type="checkbox"/>	Hillside	<input type="checkbox"/>	Raining	<input type="checkbox"/>	Warm	<input type="checkbox"/>	Grass	<input type="checkbox"/>	Light	<input type="checkbox"/>
Wet	<input type="checkbox"/>	Open	<input type="checkbox"/>	Snow	<input type="checkbox"/>	Temp.		Bush	<input type="checkbox"/>	Grazing	<input type="checkbox"/>
Dry	<input type="checkbox"/>	Confined	<input type="checkbox"/>	Windy	<input type="checkbox"/>			Crops	<input type="checkbox"/>	Agricultural	<input type="checkbox"/>
Rocky	<input type="checkbox"/>	Sand	<input type="checkbox"/>	Calm	<input type="checkbox"/>			Forest	<input type="checkbox"/>		
Road	<input type="checkbox"/>	Residential	<input type="checkbox"/>								
Canal	<input type="checkbox"/>										

Light and Sight Conditions: \_\_\_\_\_

Briefing

- Was a site briefing done? Yes  No
- Is a visitor's log maintained? Yes  No
- Is a copy of the Organisation SOP available on site? Yes  No

Clearance Method

Metal Detector	<input type="checkbox"/>	REDS	<input type="checkbox"/>	Full Excavation	<input type="checkbox"/>
----------------	--------------------------	------	--------------------------	-----------------	--------------------------

Clearance Lane drills

- Do the Deminers progress into the mined area according to the current SOP? Yes  No
- Are base stick drills as per SOP? Yes  No
- Is PPE worn by personal as determined in the SOP? Yes  No
- Can the Section Leaders see their clearance parties at all times? Yes  No
- Do the Section Leaders supervise their clearance parties at all times? Yes  No
- Do Section Leaders correct faults on the spot? Yes  No
- Are the safety distances maintained according to the Organisation SOP? Yes  No

Tripwire Feeler and Vegetation Removal drills

- Are suitable tools used? Yes  No
- Are the correct drills carried out according to the SOP? Yes  No
- When a tripwire is located, are the drills described in the SOP followed? Yes  No

Metal Detector drills

- Is the following carried out in accordance with the SOP?
- |                      |  |                   |  |
|----------------------|--|-------------------|--|
| Detector calibration | Yes <input type="checkbox"/> No <input type="checkbox"/> | Test before start | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Test periodically    | Yes <input type="checkbox"/> No <input type="checkbox"/> | Test piece used   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Batteries check      | Yes <input type="checkbox"/> No <input type="checkbox"/> | Sweep pattern     | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Signal marking       | Yes <input type="checkbox"/> No <input type="checkbox"/> |                   |  |

Prodding and Excavation drills when signal is found:

- Are the tools used appropriate and well maintained? Yes  No
- Is the angle to the ground a maximum of 30 degrees? Yes  No
- Is the spacing between prods 25mm? Yes  No
- Is the ground prodded to an acceptable depth? Yes  No
- Is the prodding position in accordance with the SOP? Yes  No
- Is the excavation drill as per SOP? Yes  No
- When a mine/UXO is located, are the drills followed according to the SOP? Yes  No

REDS Drills

- Trench is started in safe area? Yes  No
- Trench 1,2 meters wide? Yes  No



- Depth 15 cm? Yes  No
- Length ± 50 cm? Yes  No
- After raking the trench visually inspect next 50 cm and clear vegetation? Yes  No
- Light rake is used to move soil back and to expose mine? Yes  No
- Light rake is used continuously if soil is soft? Yes  No
- Water is used to soften hard soil? Yes  No
- Light rake used in controlled way? Yes  No
- Heavy rake used after light rake to obtain depth if necessary? Yes  No
- Heavy rake is placed to the front of the clearance box and inserted into the ground? Yes  No
- After that, heavy rake ploughs back the soil to the rear of the clearance box in one move? Yes  No
- Heavy rake is repeated for the entire width of the 50 cm x 120 cm clearance box? Yes  No
- Heavy rake is pulled towards deminer by its own weight not using unnecessary force? Yes  No
- The deminer is hitting the ground with the heavy rake? Yes  No
- The deminer pushes down with force on the rake? Yes  No
- The deminer lets the rake falls to the ground? Yes  No
- After heavy rake loosen the soil the light rake is utilised to remove the soil to the required depth and width? Yes  No

Full Excavation Method

- Position the base stick inside the known area, at least 30 cm behind and parallel to the base line? Yes  No
- Between the base line and the base stick dig a starting trench of 1 m (min) wide, 25 cm (min) long and 15 cm (min) deep? Yes  No
- Base stick between the deminer and the starting trench? Yes  No
- Excavate holding the trowel or scraper horizontal and using sideway motions to scrape the front face of the trench? Yes  No
- Remove loose soil carefully and move the loose soil backwards to behind the base stick? Yes  No
- Move the base stick forward as the excavation progress? Yes  No
- Base stick needs to remain between the deminer and the front edge of the excavation trench? Yes  No
- Base stick should remain approx 25 cm behind the front edge of the trench? Yes  No
- Keep the left and right inside edges of the trench (side of lane depth trenches) free from soil as excavation progress? Yes  No
- Deminer spreads and levels the soil in the middle of the trench behind the base stick? Yes  No
- Clearance lane marked by short red-top pickets every meter on both sides? Yes  No
- Deminer continuously checks the excavation depth on the front edge of the excavation trench? Yes  No
- When a mine/UXO or any other suspicious object is encountered the deminer carefully removes enough soil until he can identify the object? Yes  No
- In case of a mine the deminer will stop excavation and notify his immediate supervisor? Yes  No
- Team leader/supervisor shall identify the mine and/or UXO and he/she shall do one of the following:
  - Task the deminer to close the lane and to start a new lane? Yes  No
  - Stop clearance activities on the clearance worksite, withdraw all the deminers to a safe distance and dispose of the mine/UXO? Yes  No
- Locations of found mines are marked in accordance with SOP? Yes  No

Pulling drills and Render Safe Procedure (RSP)

- Are drills followed in accordance with the SOP? Yes  No
- Are safety distances as per SOP? Yes  No
- Is the RSP correctly conducted for the specific mine found? Yes  No

Recording of found items

- Are all items found dealt with and recorded in accordance with the SOP? Yes  No
- Have any unusual or unidentified items been encountered? Yes  No
- If yes, give details.

Handling of explosives

- Are explosives on the site stored, handled and accounted for as per SOP? Yes  No
- Are all prescribed safety procedures carried out before, during, and after charges have been fired? Yes  No

**Command and Control**

- Does the team leader/site supervisor:
  - Know the location of all Mine/UXO Clearance Teams? Yes  No
  - Inspect the teams as per SOP? Yes  No
  - Have communications with all teams? Yes  No
- Are the teams organised in the field as per SOP? Yes  No
- Was the Team Leader at the minefield at all times? Yes  No
- Was the Team Leader's control and location as per SOP? Yes  No
- Does the Team Leader correct faults as he identifies them? Yes  No
- Are the teams being rested as per SOP? Yes  No
- Does the Team Leader know the location of the medic at all times? Yes  No
- Does the Team Leader know the CASAVAC drill as per SOP? Yes  No

**Medical**

Is the following in accordance with the organisation SOP?

- |                           |  |                                     |  |
|---------------------------|--|-------------------------------------|--|
| Qualified Medic           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Ambulance Present                   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance parked correct  | Yes <input type="checkbox"/> No <input type="checkbox"/> | Stretcher                           | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance Driver          | Yes <input type="checkbox"/> No <input type="checkbox"/> | Point within 5 min from site        | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Contents of Med. Kit      | Yes <input type="checkbox"/> No <input type="checkbox"/> | Marked HLS                          | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| HLS Appropriate           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic Keep all Person's Blood Group | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Casevac plan              | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic knows casevac plan            | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Visitors included in plan | Yes <input type="checkbox"/> No <input type="checkbox"/> |                                     |  |

**Communications**

- Is there adequate communication with the Org HQ? Yes  No
- Type of communications to Org HQ? \_\_\_\_\_
- Are the communications frequently maintained? Yes  No
- Did you test the communications to the Org HQ? Yes  No
- Radio communications on site? Yes  No
- Does the radio communications work? Yes  No

**Internal Quality Control**

- Is internal Quality Control conducted as per SOP? Yes  No
- Is clearance done in accordance with the clearance plan? Yes  No

**QA Assessment**

Good  Satisfactory  Poor

**Comments and recommendations**

**Clearance team leader**

Were you debriefed after the QA inspection? Yes  No

**Clearance Team leaders comments**

QA Team Leader		QA Team	
Signature		Date	
Clearance Team Leader		Team Name	
Signature		Date	

**QUALITY ASSURANCE EVALUATION FORM: WORK SITE MARKING SYSTEM**

Date		District	
QA Supervisor		DS Division	
Task ID Number		GS Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
Team Name/Number		Grid reference	

**Briefing**

- Was a site briefing done? Yes  No
- Is a visitor's log maintained? Yes  No
- Is a copy of the EMAO SOP available on site? Yes  No

**Marking**

- Are all posts and pickets clearly coloured as per the SOP? Yes  No
- Are all posts and pickets firmly placed in the ground? Yes  No
- Does tape or rope as per SOP join all posts and pickets? Yes  No
- Is the distinction between safe and dangerous areas clear? Yes  No
- Is the base stick marked to SOP? Yes  No
- Is the base stick being used to SOP? Yes  No
- Are clearance lanes being progressively marked as per SOP? Yes  No
- Are safe lanes to correct width as per SOP? Yes  No
- Are the locations of found mines marked as per SOP? Yes  No
- Are lanes with mines closed off as per SOP until mine is disposed off? Yes  No
- Is the progressive QC inspection of a lane clearly marked as per SOP? Yes  No

**Medical**

Is the following in accordance with the organisation SOP?

- |                           |  |                                     |  |
|---------------------------|--|-------------------------------------|--|
| Qualified Medic           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Ambulance Present                   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance parked correct  | Yes <input type="checkbox"/> No <input type="checkbox"/> | Stretcher                           | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance Driver          | Yes <input type="checkbox"/> No <input type="checkbox"/> | Point within 5 min from site        | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Contents of Med. Kit      | Yes <input type="checkbox"/> No <input type="checkbox"/> | Marked HLS                          | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| HLS Appropriate           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic Keep all Person's Blood Group | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Casevac plan              | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic knows casevac plan            | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Visitors included in plan | Yes <input type="checkbox"/> No <input type="checkbox"/> |                                     |  |

**Communications**

- Is there adequate communication with the Org HQ? Yes  No
- Type of communications to Org HQ? \_\_\_\_\_
- Are the communications frequently maintained? Yes  No
- Did you test the communications to the Org HQ? Yes  No
- Radio communications on site? Yes  No
- Does the radio communications work? Yes  No

**QA Assessment**

Good  Satisfactory  Poor

**Comments and recommendations**

**Clearance team leader**

Were you debriefed after the QA inspection?

Yes  No

**Clearance Team leaders comments**

--

QA Team Leader		QA Team	
Signature		Date	
Clearance Team Leader		Team Name	
Signature		Date	

**QUALITY ASSURANCE EVALUATION FORM: MECHANICAL CLEARANCE**

Date		District	
QA Supervisor		DS Division	
Task ID Number		GS Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
Team Name/Number		Grid reference	

Type of Machine

Bozena Flail	<input type="checkbox"/>	Mechanical rake	<input type="checkbox"/>	HALO Crusher	<input type="checkbox"/>
MV4 Flail	<input type="checkbox"/>	Case Roller	<input type="checkbox"/>	Vegetation Cutter	<input type="checkbox"/>
FSD Roller	<input type="checkbox"/>	Case Front Loader	<input type="checkbox"/>		<input type="checkbox"/>

Briefing

- Was a briefing given on site? Yes  No
- Is a visitor's log available? Yes  No
- Is a copy of the SOP's available on site? Yes  No

Site Layout

- Is the site layout in accordance with the SOP? Yes  No
- Is the machine supported by a manual clearance capability? Yes  No

Purpose of using the machine:

Technical Survey/Area reduction	<input type="checkbox"/>
Ground preparation/Vegetation clearance	<input type="checkbox"/>
Verification of suspected areas	<input type="checkbox"/>
Clearance of rubble/rubbish	<input type="checkbox"/>
Clearance of areas with high metal contamination or mineralised soil	<input type="checkbox"/>

Operation of machine

- Is the machine deployed and operated as per SOP? Yes  No
- Are overlaps as per SOP? Yes  No
- Are areas where skips occurred marked and manually cleared? Yes  No
- Are safety distances in accordance with SOP maintained? Yes  No
- Is the machine operated within its design specifications? Yes  No
- Is the machine's logbook kept up to date? Yes  No
- Is the marking of the site in accordance with the SOP? Yes  No
- Are recovery procedures practised and logged as per SOP? Yes  No
- Does proper logistical support exist as per SOP? Yes  No
- Are fire fighting procedures and equipment in place as per SOP? Yes  No
- Are Internal QC carried out and logged? Yes  No
- Communication with the operator? Yes  No
- Observed by the supervisor at all times? Yes  No

Safety

- Is PPE available for Operator /Driver? Yes  No
- Are guards and sentries posted to secure safety area? Yes  No
- Is marrying up done between mech. and manual teams? Yes  No
- Is the extraction drill practised and known to all? Yes  No
- Is the machine cleared of all explosive debris after every day's operation? Yes  No

Medical

Is the following in accordance with the organisation SOP?

Qualified Medic	Yes <input type="checkbox"/> No <input type="checkbox"/>	Ambulance Present	Yes <input type="checkbox"/> No <input type="checkbox"/>
Ambulance parked correct	Yes <input type="checkbox"/> No <input type="checkbox"/>	Stretcher	Yes <input type="checkbox"/> No <input type="checkbox"/>
Ambulance Driver	Yes <input type="checkbox"/> No <input type="checkbox"/>	Point within 5 min from site	Yes <input type="checkbox"/> No <input type="checkbox"/>
Contents of Med. Kit	Yes <input type="checkbox"/> No <input type="checkbox"/>	Marked HLS	Yes <input type="checkbox"/> No <input type="checkbox"/>
HLS Appropriate	Yes <input type="checkbox"/> No <input type="checkbox"/>	Medic Keep all Person's Blood Group	Yes <input type="checkbox"/> No <input type="checkbox"/>
Casevac plan	Yes <input type="checkbox"/> No <input type="checkbox"/>	Medic knows casevac plan	Yes <input type="checkbox"/> No <input type="checkbox"/>
Visitors included in plan	Yes <input type="checkbox"/> No <input type="checkbox"/>		

Communications

- Is there adequate communication with the Org HQ? Yes  No
- Type of communications to Org HQ? Yes  No
- Are the communications frequently maintained? Yes  No
- Did you test the communications to the Org HQ? Yes  No
- Radio communications on site? Yes  No
- Does the radio communications work? Yes  No

Plan

- Is clearance done in accordance with the clearance plan? Yes  No

**QA Assessment**

Good

Satisfactory

Poor

**Comments and recommendations**

**Clearance team leader**

- Were you debriefed after the QA inspection? Yes  No

QA Supervisor		QA Team	
Signature		Date	
Clearance Team Leader		Team Name	
Signature		Date	

**QUALITY ASSURANCE EVALUATION FORM: MEDICAL**

Date		District	
QA Supervisor		DS Division	
Task ID Number		GS Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
Medic Name		Medic qualified ALS	Yes <input type="checkbox"/> No <input type="checkbox"/>
Team Name/Number		Grid reference	

**Briefing**

- Was a site briefing done? Yes  No
- Is a visitors log available? Yes  No
- Is the Current SOP available on site? Yes  No

**Medical**

- Does the medic know the CASEVAC procedure? Yes  No
- Is radio contact maintained between site leader and medic and is it logged? Yes  No
- How far away is the nearest helipad if required? \_\_\_\_\_ Km \_\_\_\_\_ min
- Is the helipad appropriate? Yes  No
- The medic has a medical kit and the contents are in accordance with the Current SOP? Yes  No
- Is the medical kit clean and well maintained? Yes  No
- Randomly check the expiry dates on five medications. List the medical items that are expired:

- Is an emergency vehicle always present? Yes  No
- Is there a designated driver for the ambulance? Yes  No
- Is the vehicle parked in such a way to get out via the quickest and safest route? Yes  No
- Is the key in the ignition? Yes  No
- Is the medical point within 5 min of the work site? Yes  No
- Does the CASAVEC vehicle have:
  - VHF radio? Yes  No
  - Oxygen? Yes  No
  - Medical kit as per SOP? Yes  No
  - Stretcher? Yes  No
- Is the vehicle clean inside? Yes  No
- Is the vehicle in good mechanical order? Yes  No
- Are CASEVAC procedures periodically exercised and registered? Yes  No
- Is a record kept of the blood group of all staff? Yes  No
- Have all the team members received first aid training and is it logged? Yes  No
- Is the stretcher in a serviceable condition? Yes  No

**QA Assessment**                       Good                       Satisfactory                       Poor

**Comments and recommendations**



**Clearance team leader**

Were you debriefed after the QA inspection?

Yes  No

**Clearance Team leaders comments**

--

QA Supervisor		QA Team	
Signature		Date	
Clearance Team Leader		Team Name	
Signature		Date	

**QUALITY ASSURANCE EVALUATION FORM: PERMANENT MARKING**

Date		District	
QA Supervisor		DS Division	
Task ID Number		GS Division	
Organization		Nearest Village	
Team Leader's Name		Site Name	
Team Name/Number		Grid reference	

Briefing

- Was a site briefing done? Yes  No
- Is a visitor's log maintained? Yes  No
- Is a copy of the SOP available on site? Yes  No

Site layout

- Is a detailed map of the boundaries of the minefield available? Yes  No
- Is the layout of the work team as per SOP? Yes  No

Fencing

- Is sufficient fencing material on site to complete the task? Yes  No
- Is the fence erected as per SOP? Yes  No

Marking and recording

- Is a detailed drawing of the fencing available? Yes  No
- Is this drawing filed in the task dossier? Yes  No
- Are all reference points all easily identifiable? Yes  No
- Is the Landmark easily recognised? Yes  No
- Is a Benchmark permanently fixed and recorded? Yes  No
- Are all turning points properly recorded? Yes  No

Medical

Is the following in accordance with the organisation SOP?

- |                           |  |                                     |  |
|---------------------------|--|-------------------------------------|--|
| Qualified Medic           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Ambulance Present                   | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance parked correct  | Yes <input type="checkbox"/> No <input type="checkbox"/> | Stretcher                           | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Ambulance Driver          | Yes <input type="checkbox"/> No <input type="checkbox"/> | Point within 5 min from site        | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Contents of Med. Kit      | Yes <input type="checkbox"/> No <input type="checkbox"/> | Marked HLS                          | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| HLS Appropriate           | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic Keep all Person's Blood Group | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Casevac plan              | Yes <input type="checkbox"/> No <input type="checkbox"/> | Medic knows casevac plan            | Yes <input type="checkbox"/> No <input type="checkbox"/> |
| Visitors included in plan | Yes <input type="checkbox"/> No <input type="checkbox"/> |                                     |  |

Communications

- Is there adequate communication with the Org HQ? Yes  No
- Type of communications to Org HQ? \_\_\_\_\_
- Are the communications frequently maintained? Yes  No
- Did you test the communications to the Org HQ? Yes  No
- Radio communications on site? Yes  No
- Does the radio communications work? Yes  No

**QA Assessment**

Good  Satisfactory  Poor

**Comments and recommendations**

**Clearance team leader**

Were you debriefed after the QA inspection?

Yes  No

**Clearance Team leaders comments**

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QA Team Leader		QA Team	
Signature		Date	
Clearance Team Leader		Team Name	
Signature		Date	

## Amendment record

### Management of SLNMAS amendments

Amendments to this document will be published periodically. An accurate record of amendments is to be maintained in the table below.

Any comments, suggestions or proposed amendments to this document should be addressed to: The National QA Coordinator, Sri Lanka National Mine Action Centre (NMAC), Colombo.

Serial No.	Date	Paragraph		Amendment	Remarks
		Old	New		