



South Sudan

National Technical Standards Guidelines

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Chapter 16

16 Health & Safety, Social & Environment (HSSE)

16.1	Introduction	3
16.2	Scope.....	3
16.3	Work Routines.....	3
16.4	Staff Insurance Cover.....	4
16.5	Health & Safety Requirements	4
16.6	Social and Environmental Requirements.....	6
16.7	Worksites & Accommodation Facilities	6
16.8	Environmental Considerations during Mechanical Operations	9
16.9	Environmental Considerations during EOD Operations	10
16.10	Environmental Considerations for Vehicles	11
16.11	Cultural Considerations	12
16.12	Environmental Incident Register.....	12
16.13	Reviews	12
16.14	HSSE Responsibilities.....	13

Annex A - Prevention and Mitigation of COVID-19 during Mine Action Operations.....	15
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16.1 Introduction

- a. Several of the components of mine action are inherently dangerous and pose threats to the environment as well as personnel. However, by ensuring that mine action personnel are well prepared, that safe work practices are applied, and that due consideration is given to environmental impact, the level of risk to personnel and the environment can be greatly minimised.
- b. NMAA/UNMAS-SS as the authority for mine action within South Sudan, are charged with the responsibility for establishing the requirements for occupational health & safety (H & S) and social & environment (S & E) management systems for mine action and for ensuring that mine action organisations correctly apply them.

16.2 Scope

- a. This standard describes the requirements for HSSE management systems in mine action in South Sudan and the key elements of those systems.

16.3 Work Routines

- a. The urgency of humanitarian demining places strong pressures on mine action organisations and individuals to achieve results quickly. Such pressures are understandable, however they shall not be allowed to override the controls and monitoring necessary to ensure humanitarian demining is conducted as safely as possible.
- b. In recognition of this need, all mine action organisations shall conform to the work routines described below. These routines apply equally to humanitarian and development demining.
- c. Daily Work Routines: Personnel employed on humanitarian demining activities shall not 'work' more than a total of 10 hours in any workday of which no more than 6 hours, excluding breaks, shall be physical demining. For the purposes of this standard, the term 'work' does not include travel times to and from the task-site, set-up/pack-up processes, briefings/debriefings, organized breaks, movement to and from the control-point to/from the place of work and any other activity prior to the commencement of works signal/order or cessation of works signal/order. Personnel

employed on demining, including supervisors, shall be given a minimum break of 10 minutes for every 60 minutes of demining work.

- d. Rest Days: Personnel employed on demining operations shall not work more than 21-days without a break. Breaks should be applied on a minimum ratio of 1-day off for every 6-days worked.
- e. Long-Term Routines: All personnel employed on demining, including supervisors, shall have a break of at least 7 consecutive days for each four-month period worked.

16.4 **Staff Insurance Cover**

- a. All national staff employed by mine action organisations in South Sudan shall be provided, at no cost to the individual, with insurance cover.

16.5 **Health & Safety Requirements**

- a. Risk assessment: The site Implementation Plan (IP) acts as a risk assessment. When conducting Non-Technical Survey (NTS) for the task all hazards are to be identified for both the worksite and the team accommodation location for the duration of that specific task. The format for IPs is described in Chapter 22 to this NTSG.
- b. Mitigation measures: Mitigation measures for all hazards identified for that specific site are, in normal circumstances, stated as part of the organisation's SOP. In cases when a hazard is identified and there is no SOP, a Site-Specific SOP or Technical Note shall be produced either as an annex or as an enclosure to the IP and is reviewed by the UNMAS sub office before work can commence.
- c. Amendments: The IP shall be amended as necessary in the event of a new hazard being identified or as a result of any team member applying the 'NO-STOP' policy as described in the introduction to this NTSG. This amendment shall be labelled as an Amendment to Implementation Plan (AIP) and shall undergo the same quality controls as the IP. In the event of the No-STOP policy being applied the organisation's in country senior management must be inform of the identified unforeseen risk.

- d. Implementation Plan records: The IP and any subsequent AIPs are to be retained in the work site file and archived once the task has been completed.
- e. Management of hazardous materials: Occupational diseases may occur as a result of exposure to hazardous substances in the form of particulates, ingested materials or skin contact with substances. It is the responsibility of the organisation to identify any hazardous materials or chemicals at the procurement stage and shall ensure that the relevant Material Safety Data Sheets (MSDS) are obtained from the manufacturer. MSDSs shall be available to any employee, sub-contractor or visitor who may interact with the materials/chemical substances on site.
- f. Access and site security: It is the site supervisor's responsibility to ensure that all site security requirements identified in the IP are fully implemented.
- g. Site Induction briefings: Prior to work commencing an induction briefing for all team members and visitors to the site is delivered by the site supervisor on a daily basis. The format for the brief is at Chapter 22 to this NTSG and forms part of the Site Daily Operations Brief.
- h. Site inspections: The criteria for regular and ad hoc site inspections in the form of IQA and EQA is described in detail in Chapter 14 to this NTSG. Such inspections shall not be limited to the work site and shall include periodic inspections of the accommodation site and HQ locations.
- i. H & S awareness: H & S awareness shall be included in all training programmes and then maintained during daily safety briefings and specific hazard Toolbox Talks where necessary.
- j. Emergency and Evacuation procedures: At all times the team shall have a written Emergency response Plan (ERP) which enhances the site CASEVAC plan. The ERP shall be submitted and retained by the in-country HQ and shall state as a minimum:
 - Date of last review.
 - Team location and alternate location.
 - Evacuation Plan.
 - Liaison carried out with local authorities and contact details.

- Compound security description.
 - Vehicle security.
 - Communications.
 - Explosives security.
 - Cash security.
 - Water management.
 - Packed fuel, oils and lubricants.
- k. Communication and Information sharing: HSSE reporting to UNOPS shall be through the relevant contractual reports.
- l. Consultation with the workforce: All employees shall be encouraged to raise any concerns on H & S management during meetings, briefings, toolbox talks or at time by applying the 'NO-STOP' policy.
- m. Accident and incident reporting and investigation: The processes for investigations is detailed in Chapter 15 to this NTSG. High potential near misses are to be reported to the relevant UNMAS sub office at the earliest opportunity. The event and subsequent corrective actions shall be listed in Monthly progress reports and summarised as part of the Final Report.

16.6 **Social and Environmental Requirements**

- a. Humanitarian demining activities shall be carried out in a manner that ensures, where practicable, that:
- b. Previous hazardous areas are left in a state in which they are suitable for their intended use.
- c. Non-hazardous areas affected by demining operations are left in a similar condition to that before demining operations commenced.

16.7 **Worksites & Accommodation Facilities**

- a. Worksites and Accommodation Facilities: The following should be considered and wherever practicable be implemented:
 - i. Preservation of the environment shall be considered in the site selection and layout for worksites and accommodation facilities.
 - ii. Temporary accommodation facilities shall be located in consultation with local communities to ensure that they do not affect local economic activities or social and cultural values. They shall comply with all national or local regulations concerning the construction of temporary facilities.

- b. Waste management and erosion: Temporary accommodation sites shall be well drained and, if necessary, have sufficient soil depth to permit the digging of toilets, wastewater soak pits and rubbish pits.
- c. Toilets and ablution facilities shall be properly constructed and shall be used on all demining worksites and temporary accommodation facilities. If cultural norms require, separate toilets and ablution facilities shall be constructed for male and female team members.
- d. Personnel shall not deposit human waste on the soil surface or in water courses.
- e. Toilets shall be provided at a minimum of one for every 20 persons and they shall be located at least 20m from any demining worksite control point, accommodation or food preparation areas, watercourses or wells.
- f. Where toilets are dug into the ground, the depth of the hole shall be sufficient to allow 0.5m of earth cover over the toilet pit when it is filled in.
- g. All domestic rubbish shall be removed from the site, buried or burned on a daily basis.
- h. Solid waste and ash left over from burning shall be either removed from the site or buried.
- i. Containers used for storing domestic rubbish shall be vermin proof and constructed to contain spilled liquids.
- j. Rubbish removed from the site shall be appropriately disposed of.
- k. Any rubbish spilled during the removal process is to be cleaned up.
- l. Rubbish shall only be buried with the approval of the local communities and then in locations agreed to by them.
- m. Rubbish pits shall be properly located away from accommodation and food preparation areas, watercourses and wells, and shall be located and constructed so as not to contaminate groundwater.
- n. Rubbish pits shall be deep enough to allow at least 1m of earth cover over the rubbish when they are filled in and shall be constructed large enough to take all the rubbish from the site.
- o. Where possible, rubbish in pits shall be burned or covered over on a regular basis.

- p. Burning: The burning for cooking, domestic heating and for rubbish disposal shall only be carried out provided the burning is supervised, firefighting equipment is provided and adequate precautions are taken to ensure that fire does not spread. As a minimum, firefighting equipment shall be serviceable and should comprise of a suitable fire extinguisher.
- q. Waste water: Water from washing, bathing or kitchen areas shall be drained into properly constructed soak pits constructed large enough to take the amount of wastewater generated.
- r. Waste water shall not be released if it may enter watercourses.
- s. Water supply: The supply of domestic water shall be carried out in a manner that does not affect the supply of water to the local communities; unless the local communities have been properly consulted on this matter and have agreed to any arrangements made.
- t. Water course management: Watercourses shall not have the flow of water obstructed during operations unless it is necessary to divert or dam the watercourse to allow demining to be conducted. If it is necessary to divert or dam a watercourse, the landowner or local community shall be consulted and their agreement obtained before the dam is constructed.
- u. Vermin and disease carrying insects: As far as practically possible, mine action organisations shall implement preventive measures for the control of vermin and disease carrying insects.
- v. Remediation: On completion of operations all buildings, equipment, surplus materials, fencing (except that marking hazardous areas) and other such items shall be completely removed. Toilets soak pits and rubbish pits shall be filled in, covered with soil and the surface stabilised to prevent erosion and to allow natural regeneration of vegetation. As far as is practicable, all disturbed areas shall be restored to their original condition.
- w. Debris, rubble and wire and any other remains of obstacles removed from a demining worksite shall be dumped in a cleared area adjacent to the worksite. When applicable, local communities shall be consulted when locating this dump site.

- x. Any toxic waste products of demining operations shall not be buried. They shall be collected and removed to an approved disposal area.
- y. Air Degradation: When mine action organisations are conducting operations, they are to remain aware of the location of local communities, the prevailing wind conditions in the area and the ability of these prevailing winds to carry smoke, dust and toxic fumes to local communities. They shall ensure that the impact on local communities of any degradation of air quality is minimised.
- z. Mine action organisations shall liaise with local communities and authorities to explain the scope, scale and duration of any likely air degradation and the long-term benefits to be achieved as a result of this short-term inconvenience.

16.8 **Environmental Considerations during Mechanical Operations**

- a. When mechanical operations are conducted, the ground over which the operations were conducted should be left as close as possible to its original state such that it is suitable for its intended use. Where vegetation is removed from ground that is subject to erosion, measures are taken to stabilise the ground on completion of mechanical operations.
- b. When mechanical assets are serviced or repaired in the field, any used parts or by-products from the work shall be collected and disposed of in an environmentally acceptable location and manner.
- c. The dumping of oil or other materials onto the ground or into any watercourse is prohibited.
- d. Drained oil or other materials shall be contained using a drip pan or other suitable receptacle and disposed of in an environmentally acceptable manner.
- e. Mechanical assets shall only be operated within the designated demining worksite, within the boundaries of any temporary accommodation facilities or any other areas approved by the NMAA/UNMAS-SS for training or testing purposes.
- f. Mechanical assets shall be properly maintained. Any fuel or oil leaks that occur shall be promptly repaired.

16.9 **Environmental Considerations during EOD Operations**

- a. Mines, ERW and AXO shall be disposed of without creating any danger to people, property or infrastructure. If mines, ERW or AXO must be destroyed in-situ and there is a risk to property or infrastructure, protective works shall be used. If, even with protective works, there is still a risk of damage to property or infrastructure, the NMAA/UNMAS-SS shall be informed and local communities or authorities consulted about the operation.
- b. When carrying out EOD operations involving potentially toxic or hazardous components, consideration shall be given to the contamination of the surrounding area by toxic or hazardous substances, for example, white phosphorus.
- c. When EOD operations cease, the area used shall be refurbished in accordance with the requirements of the local communities, and if necessary, the land formally handed over. As a minimum, the refurbishment shall include the recovering and disposal of all large items of scrap; the filling in of any pits and craters made by bulk disposal operations; and the fencing of and marking of any areas where there may be residual non-explosive hazardous material left in the ground.
- d. Mine action organisations shall ensure that previously safe areas are not contaminated through the unauthorised or unplanned movement of mines or ERW.
- e. Mine action organisations shall ensure all personnel are aware of, and comply with, the prohibition on the movement of mines and ERW from work sites unless as part of a disposal activity.
- f. When moving mines or ERW as part of a disposal activity, take an accurate count of the items moved and confirm that they have all been destroyed in the new location.
- g. Conduct thorough 'Free From Explosives' (FFE) inspection of any packaging material moved from a worksite or any mines or ERW that are to be used for training aids.
- h. Thoroughly check the immediate environs of all mechanical clearance or disposal worksites to ensure that no of mines or ERW have been 'thrown' into these areas.

- i. Where it is necessary to establish fuel storage facilities, proper precautions shall be taken to ensure that fuel, oil and lubricants are stored safely and does not contaminate the soil or groundwater.

16.10 **Environmental Considerations for Vehicles**

- a. No fuel storage facilities shall be positioned closer than 30m to a watercourse.
- b. All storage tanks, containers and fuel dispensing equipment shall be regularly maintained to ensure that there are no leaks.
- c. Vehicle and equipment fuelling should be undertaken on a hard surface or over drip pans to ensure that any spilled Fuels, Oils or Lubricants are contained.
- d. Adequate fire fighting equipment shall be positioned at the fuel storage facility. As a minimum, this shall be a serviceable CO2 fire extinguisher.
- e. When maintenance, repair or washing of vehicles and equipment is required on worksites, specific areas shall be designated for this activity.
- f. Waste water from vehicle washing shall not be released so that it may enter watercourses. If necessary, soak pits shall be constructed.
- g. The dumping of oil on the ground is prohibited. Drained oil shall be contained using a drip pan or other suitable receptacle and disposed of in an environmentally acceptable manner.
- h. Any used parts, by-products of the maintenance or other rubbish (except waste oils) shall be disposed of as for domestic rubbish.
- i. During the transportation of any hazardous, toxic or flammable materials with the potential to damage the environment, the precautions that shall be taken to ensure that risk is minimised.
- j. All materials shall be transported in containers that will minimise or prevent spills or leakage.
- k. Materials shall be securely loaded in the transport.
- l. Appropriate fire precautions shall be taken relevant to the materials being transported.
- m. Vehicles carrying hazardous material shall be driven in a safe and careful manner.

16.11 **Cultural Considerations**

- a. Prior to commencing operations, mine action organisations shall investigate the immediate vicinity of the worksite to identify any areas of cultural or historical significance. They shall also liaise with local communities and authorities to aid in the identification of such sites.
- b. Having identified any areas of cultural or historical significance, mine action organisations shall take all possible steps to prevent damage to these sites. Such action may dictate that any mines or ERW found at the work site are removed to another area for destruction. If these items are unsafe to move and in-situ demolitions are necessary, protective works shall be used.
- c. If any article is located during mine action operations and is suspected of being of cultural or historical significance, work in that area shall cease and the matter shall be immediately reported to the NMAA/UNMAS-SS.

16.12 **Environmental Incident Register**

- a. At each worksite, mine action organisations shall maintain an 'Environmental Incident Register'. This register shall record the details of any environmental incident that may occur, the action taken to remedy the situation, the likely lasting results of the incident and the liaison carried out with the local communities or authorities in relation to the incident. The register shall be made available to NMAA/UNMAS-SS on request.
- b. All significant environmental incidents shall be reported to NMAA/UNMAS-SS along with details of results and action taken, as soon as practicable after the incident.

16.13 **Reviews**

- a. The HSSE management systems of individual mine action organisations shall be reviewed by NMAA/UNMAS-SS during the accreditation process.
- b. NMAA/UNMAS-SS reserves the right to review the current HSSE system of any mine action organisation at any time to ensure it remains valid for current conditions. Should deficiencies be found,

the mine action organisation shall be given a suitable period to remedy them.

16.14 **HSSE Responsibilities**

- a. NMAA/UNMAS-SS should establish a system to issue or approve regulations, codes of practice, SOPs or other suitable guidance on HSSE in the working environment in order to:
 - i. Provide information and advice in an appropriate manner, to employers with a view to eliminating hazards or reducing them as far as practicable.
 - ii. Co-ordinate activities concerned with HSSE which are exercised nationally.
 - iii. Undertake or promote studies and research to identify hazards to safety and health and find means of overcoming them.
- b. Mine Action Organisations: Each mine action organisation shall develop a detailed, comprehensive and suitable HSSE management system prior to receiving accreditation to conduct mine action in South Sudan. The organisation shall:
 - i. Provide a written policy covering HSSE detailing the key responsibilities, commitments and procedures.
 - ii. Provide and maintain safe work places, machinery and equipment, and adopt safe work practices and procedures with a view to eliminating hazards or minimising them as much as practicable.
 - iii. Provide adequate supervision and training, including development and refresher training where appropriate.
 - iv. Provide, at no cost to the individual, adequate Personal Protective Equipment (PPE) and protective clothing, including High Visibility vests for personnel conducting traffic control operations.
 - v. Provide, at no cost to the individual, adequate health care and emergency medical support in case of accidents.
 - vi. Set out the HSSE system in writing and ensure this information is delivered to all staff in a language or medium each individual readily understands.

- vii. Verify the implementation and application of the HSSE system and periodically conduct systematic, detailed and comprehensive audits of the HSSE system.
 - viii. Appoint a designated HSSE officer and ensure that all staff have access to this person.
 - ix. Ensure that all accidents and incidents concerning HSSE are reported, recorded and investigated by the HSSE officer, and that the findings of such investigations are promulgated to all staff and acted upon.
 - x. Notify NMAA/UNMAS-SS of all demining incidents in accordance with Chapter 15.
 - xi. Ensure that adequate insurance cover against death, disablement and injury is provided for all staff, including a complete designation of beneficiaries form for any accident or death insurance policy payout.
 - xii. Develop and implement work practices that minimise unnecessary detrimental impact on the environment.
 - xiii. Each mine action organisation shall conduct an annual review of its HSSE policy to ensure it remains valid for their particular operating environment. Additionally, the organisation shall review, and amend as necessary, its HSSE system each time it introduces new methodologies or technologies.
- c. HSSE Responsibilities of the Individual: Along with the mine action organisation, each individual staff member has a responsibility for his or her own health and safety. Each individual shall:
- i. Take all reasonable care for their own safety and that of other persons who may be affected by their acts or omissions at work.
 - ii. Comply with instructions given for their own conduct and safety.
 - iii. Use safety devices and PPE consistently, correctly and as directed and take all due care of these items.
 - iv. Immediately report to their supervisor or superior any situation which they have reason to believe could present a hazard and which they cannot themselves correct.

Prevention and Mitigation of COVID-19 during Mine Action Operations

16.15 Introduction

- a. The needs to reduce risk and to provide a safe working environment are fundamental principles of mine action.
- b. To clarify the term 'safe' in the respect of mine action, to say that a situation is 'safe' does not necessarily imply that all risk has been removed. It merely assumes that the risk has been reduced to a 'tolerable' level.
- c. Managers of mine action projects are to achieve a safe working environment by providing effective management and supervision, by developing work practices that contribute to risk reduction, selecting equipment with inherently safe design, providing appropriate training, and making available effective Personal Protective Equipment (PPE), including hand sanitizer, face mask and gloves and protective clothing for both male and female employees.
- d. The aim of this Annex is to issue guidelines for mitigation measures for diseases which may occur as a result of inhaled or ingested particulates more specifically, COVID-19.

16.16 HQ Locations

- a. HQ locations shall be fully conversant with the most current entry requirements and other restrictions issued by the Government of South Sudan (GOSS).
- b. Organisations shall maintain a COVID-19 Business Continuity Plan (BCP). The BCP should be considered as a living document and updates shall be submitted to UNMAS/NMAA.
- c. Operations plans, task dossiers and IPs shall take into consideration WHO guidelines on reducing transmission in terms of the number of personnel on site, travel times, transport restrictions, productivity and the impact on casualty treatment and evacuation. <https://openwho.org/channels/covid-19>
- d. All medics shall receive specific COVID-19 training and shall be informed of updated guidelines issued by the WHO and UNMAS/NMAA. Team medics are to be responsible for the health

of team personnel and be capable of providing necessary advice to team members.

- e. Entry-control points to compounds shall be strictly controlled and in cases where entry-controlled points are manned, the personnel responsible for entry/exit are to be fully conversant with the entry control processes. A booking in and out systems should be in place.
- f. Hand wash stations should be provided and hand washing before entry enforced.
- g. When available, all staff shall be issued with individual hand sanitizer and instructed on how and when to use it in accordance with WHO guidelines.
- h. HQs and teams can be considered a self-contained unit however all staff shall wear face masks if they are less than 2m from a person from outside that unit.
- i. A medic should be available to take the temperature of persons requiring entry. Thermal thermometers should be used as much as possible.
- j. All staff shall have their temperature taken twice a day. Recorded temperatures shall be classified as 'medical in confidence'.
- k. Posters reminding personnel of preventative measures may be displayed in offices, accommodation and social areas.
- l. Isolation areas: When self-quarantine periods are required for new personnel and nominated isolation hotels are not being used, specific isolation areas shall be designated within compounds. These areas shall have:
 - Individual tents/rooms.
 - Separate ablutions.
 - Sufficient life support mechanisms including hand sanitizer.
 - Temperature monitoring mechanism.

16.17 **Vehicles**

- a. 2m social distancing is not practically possible in most vehicles, therefore face masks shall be worn at all times and the number of passengers kept to a minimum. For security reasons vehicles shall not be driven outside compounds with less than two people on board.
- b. Hand sanitizer shall be available in all vehicles.

- c. Surfaces are to be wiped with alcohol-based wash before and after use.
- d. Use of a face mask shall be mandatory for all occupants when travelling in a vehicle.

16.18 Team Camps

- a. The systems stated in para 16.15 shall also apply for team camps. In addition:
 - b. Teams shall be self-sufficient as far as practically possible. Local cooks, cleaners and other camp admin staff shall be integral to the team and not recruited locally.
 - c. Team members accommodation shall be single units and not shared.
 - d. Signs may be displayed around the camp boundaries to discourage non-essential entry.
 - e. Team medics, supported by the team supervisor are responsible for enforcing precautionary measures within the camp area.

16.19 Demining Worksite

- a. Social Distancing: Social distancing shall be maintained at all times during briefings, breaks and administration periods.
- b. One-man drill: One-man drill should be encouraged wherever possible.
- c. Deminer equipment: Demining equipment shall be issued to individual deminers and not shared. This equipment shall be visibly marked in a way that the owner can be easily identified without the equipment being touched.
- d. In the case of equipment which requires more than one operator or pooled equipment e.g. LLMDs, strimmers, wheelbarrows etc, the equipment shall be wiped with an alcohol-based sanitizer before and after use.
- e. Temperature checks: The team medic is to conduct a temperature check for all visitors, including QA officers, and the visitors log annotated accordingly.
- f. QA Monitoring: QA processes shall be maintained within the guidelines of this document. In the context of external monitoring, QA visits shall only take place within the law of that local area. In

the cases where external QA monitoring cannot take place, HQs and Sub offices are to closely monitor internal QA reports. Use of photographs and video may be used to demonstrate processes and operational challenges.

- g. Task Completion: The minimum number of people from the local community shall be invited during handover and briefed on the concept on social distancing prior to arrival.

16.20 **NTS and EORE**

- a. NTS: NTS activities shall be designed in such a way that there is the minimum exposure with local communities.
- b. Interviews should be conducted using the minimum personal and community leaders and social distancing rules shall be observed.
- c. Prior to the interview commencing, preventative measures should be communicated to interviewees.
- d. EORE: In addition to the above, the gathering of large groups shall be discouraged.
- e. EORE teams shall conduct activities by 'household' rather than by community groups.
- f. A reduction in beneficiaries is to be expected.

16.21 **CASEVAC**

- a. Physical contact during CASEVAC should be avoided with the exception to the administration of First Aid.
- b. The team spine board and stretcher shall be cleaned with an alcohol-based sanitizer prior to work commencing.
- c. With the exception of team members carrying a casualty and carrying out treatment actions, social distancing shall be maintained at all times during the CASEVAC process.
- d. In the case of a COVID-19 casualty, PPE shall be worn by the CASEVAC team.
- e. CASEVAC rehearsals may be carried out without physical contact.