

Annex A to SNMAS 06.03 Central Disposal Site

1. General CDS Requirements

1.1. Considerations for Physically Sighting the CDS

Careful consideration shall be given to the physical sighting of the CDS, and the following points shall be adhered to:

- a) The CDS shall have a safety distance of not less than 2,000 meters from the communities and other populated areas.
- b) The land on which the CDS is to be used shall not be in use by the public and shall have no grazing or agricultural value.
- c) The area shall be clear of inhabited buildings and personnel for at least 2,000m in all directions.
- d) Access to the area should be controllable, with the use of warning signs, observation points and sentries.
- e) A suitable protected firing point should be located a minimum of 300m from the demolition site and situated where maximum visibility to the whole area is available. A protected firing point is not necessary if a remote-controlled firing device is being utilized.
- f) Suitable parking and access routes should be available for delivery of the UXO.
- g) Liaison shall be conducted with local authorities and Government, Police and surrounding villagers.
- h) The location should offer limited or restricted access by local population and situated at a safe distance from local villages, main roads and farming land.
- i) Probable noise levels, ground shock and blast damage to dwellings, security of the site, presence of nomadic tribes and any other local influences must be strongly considered.

2. Properties of CDS

2.1. Disposal Grounds at a CDS Require the following Properties:

- a) Isolation: Isolation is the most important requirement for the safety and protection of personal property, livestock and structures.
- b) Deep soil: That is reasonably free of rocks and stones.
- c) Secondary fire hazards: Disposal sites shall not be located over pipelines, over power cables or near fuel storage areas.
- d) Electro-Magnetic Fields (EMF): Major demolitions are normally initiated by electrical means which are vulnerable to external EMF. Disposal sites shall not be situated near radar installations, radio transmitters or high-voltage power lines.
- e) High ground: Higher ground reduces the effects of blast and ground shock and is also relatively well drained. However, high ground also tends to increase fragmentation range.

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3. Priorities and Principles of CDS

The destruction and demolition of munitions and EO are potentially hazardous activities and involve risk and the risks are minimised if the correct priorities and principles are followed.

3.1. Priorities

The priorities that shall always be observed at a CDS are:

- a) **Safety:** Safety of both personnel and property, if a method is not safe it shall not be used.
- b) **Security:** Security of both the items being destroyed and the serviceable explosives used to destroy them.
- c) **Accounting:** Proper accounting of explosive usage is critical. Any losses of explosives shall be promptly identified, investigated and reported.
- d) **Speed of Work:** Speed shall never be achieved at the expense of any of the first three priorities.

3.2. Principles

The following principles shall be applied to all EO disposal tasks:

- a) **Know the ammunition:** It is crucial to know in detail both the EO being destroyed and the explosives being used. Unless the design characteristics of both are known, it will not be possible to determine a safe and effective means of disposal.
- b) **Plan the task carefully:** Do not leave the planning until arrival at the disposal site, work out the program and procedures in details; well in advance.
- c) **Create a safe working environment:** Create and maintain a working environment that is safe for everyone; the disposal party, other personnel, local population, property, livestock, vehicles and equipment.
- d) **Give and obey directions precisely:** The disposal site is no place for ambiguity or misunderstanding. Directives shall be clearly understood by all personnel.
- e) **Careful observation:** Observe all the safety precautions and use only the approved methods, do not take short cuts.
- f) **Clear the disposal area prior to departure:** No disposal task is complete until the demolition danger area has been cleared of all hazards and contamination, including clearance of all rubbish and litter.

4. CDS 'Site Standing Orders'

The CDS 'Site Standing Orders' shall include information on the following requirements:

- a) The types of disposal operations that is going to be conducted and the limitations on these operations.

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- b) The layout of the site; including all Control Points and, where necessary, the location of separate areas for conventional demolitions, burning and other specialized disposal operations.
- c) The command and control arrangements; including the location and manning of sentry points.
- d) The safety requirements; including authorized access routes, the route(s) to the nearest suitable medical facility, the position of warning signs and marking and the provision of fire-fighting equipment.
- e) Where applicable, any requirements and procedures to be followed for the issue of 'Notice to Airmen (NOTAM)'.
- f) Communications.
- g) Environment.
- h) Liaison; both with local authorities and the community before and after disposal activities are conducted.
- i) Post-disposal clearance of scrap and physical maintenance of the site.
- j) All requirements for the keeping of records of the items having been disposed of.

5. Demolition Pits Requirements

The requirements of a demolition pit at the CDS are as follows:

- a) When possible site the pit in a natural depression and in soft ground.
- b) The pit should as much as possible be free from stones and any other material that could create flying fragments and debris during demolitions.
- c) The pit should initially be dug approximately 1.0m x 1.0m x 1.0m. It will get progressively larger with each demolition.
- d) The soil excavated from the pit should be mounded around the top outer edges and compacted in order to deflect blast and improve fragment containment.

5.1. Rules for the Use of Demolition Pits

Demolition operators should utilize existing demolition pits when it is practical to do so. The following rules shall be adhered to when using a demolition pit within a CDS:

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- 1) Before and after each use, the pit shall be checked for any unexploded ordnance.
- 2) Maximum effort shall be made to avoid the risk of items being thrown out of the demolition pit during demolitions.
- 3) Any intended destruction of white phosphorus (WP) shall be detailed to the NMAC Operations and its sub office
- 4) No pit shall be used for at least 24 hours following a detonation, unless the ground is thoroughly soaked with water.
- 5) Safe routes into the pits shall be established and all working areas in pits shall be safe and stable.
- 6) Measures shall be taken to ensure that personnel do not walk or stand over undercuts into the sides of pits.

5.2. Loading the Demolition Pit

To ensure complete destruction of all EO set up in the pit for demolition and to minimize blast and fragmentation affect from the demolition, the following points shall be adhered to when loading the demolition pit:

- a) When forming stacks items shall be placed in the pit in four layers, the bottom layer should contain low quantity of explosives like fuses, grenades and SSA. The second layer should contain thick cased munitions. Thin cased high explosive items shall then be placed in third layer and then fourth layer should contain donor charge items.
- b) To establish and maintain an effective propagation wave and ensure a successful demolition, air voids shall be minimized. Munitions shall therefore be placed directly in contact with a donor charge and directly in contact with each other.
- c) Stacks and their explosive chains shall be stable enough and sufficiently shielded so as not to be affected by detonations in other pits.
- d) Once the donor charges have been placed, the stack may be covered with a plastic sheet and the pit backfilled and tamped with soil.
- e) All munitions awaiting destruction shall be stored outside the fragmentation distance, if they are not to be used for the serial being loaded.
- f) Minimum number of personnel should be used when loading the demolition pit.
- g) The pit shall never be more than half filled with EO.
- h) Detonators or initiation sets shall not be buried under any circumstances.

6. CDS Control Points

Several control points are required at a CDS, and shall include:

- a) Vehicle parking area.

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- b) Command Post (CP).
- c) Stores and administration area.
- d) First aid post.
- e) Helicopter Landing Site (HLS), if appropriate.
- f) Rest areas.
- g) Safety areas.
- h) Field explosive store.
- i) Toilets.
- j) Firing point.
- k) Sentry points.
- l) Locations for warning signs.

6.1. Sentries

- 1) Placement of Sentries: The placement of sentries shall conform to the following requirements:
 - a) Sentries shall be placed to control all likely access routes to the disposal site.
 - b) Sentries shall be placed outside the danger area. Where sentries cannot be placed outside of the danger area, they shall be provided with suitable protection from the danger of fragmentation and blast. This protection shall not to affect the sentry's ability to effectively fulfil their duties.
 - c) Sentries shall be able to observe the whole danger area including gullies and dead ground.
 - d) Sentries shall be allocated individual areas of responsibility and these areas shall overlap to ensure complete coverage.
 - e) Sentries shall have radio communications with the firing point as the primary means of communication and have an alternate means of communication.
 - f) The supervisor of the disposal task shall regularly test communications with the sentries. If communications are lost, preparation for the demolition shall be suspended until communications are re-established.
- 2) Briefing of Sentries: Prior to placing sentries, the supervisor of the disposal task shall thoroughly brief the sentries on their responsibilities and duties. As a minimum, the points shall be covered during the briefing:
 - a) The precise location of their sentry post and their individual area of responsibility.

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- b) The location of other sentries.
- c) The requirement to remain all-times alert.
- d) The procedure for communications checks and the call signs and signals to be used.
- e) The alternative means of communications to be used if radio communications fail.
- f) The action the sentry shall take in the event of misfires, accidents, loss of communications and unauthorised entry into the disposal area.

7. Requirements of OIC

The following requirements shall be followed by the Officer in Charge (OIC) of the demolition being conducted at the CDS:

- 1) Pre-firing requirements shall include:
 - a) The danger area shall be cleared of all non-essential personnel, vehicles, equipment and livestock.
 - b) Sentries shall be warned that firing is about to start.
 - c) If electrical initiation systems are used, the complete firing circuit shall be tested for continuity.
 - d) Immediately before firing occurs the disposal supervisor shall radio the sentries to confirm the danger area is still clear and to warn them the firing of the charges is about to occur.
- 2) Misfire requirements shall include:

Supervisor shall observe the following wait time before moving from the firing point and approaching the demolition charge:

- a) Electrical initiation: 10 minutes.
- b) Non-electrical initiation: 30 minutes.

During the wait time, no person shall leave the safety area, nor shall any unauthorised person be allowed access to the disposal area.

- 3) Post-Firing requirements shall include:
 - a) Any mandatory 'wait time' for the type of disposal operation being conducted shall elapse before any movement into the danger area is to take place.
 - b) The supervisor of the task shall personally check that all charges have fired as intended and there is no residual hazard in the area.
 - c) Any necessary post-demolition activities shall occur for the type of EO being disposed including visual search and raking of the ground to ensure no WP munitions are present.

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- d) Once the supervisor has determined that the area does not contain any EO, the 'all clear' shall be announced.

8. General Safety Requirements

The following general safety requirements are applicable to all disposal operations:

- a) No disposal tasks shall be undertaken if there are electrical storms in the immediate area.
- b) The supervisor shall ensure that required safety distances can be achieved for the specific disposal task.
- c) There shall be no smoking or naked flames within 30m of explosives.
- d) All work shall cease if communications cease to function.
- e) A qualified medic, dedicated ambulance driver and appropriate medical equipment are mandatory in each disposal task.

8.1. Accident Prevention and Requirements

The mandatory requirements in the case of an accident shall be:

- a) The disposals party shall include at least one person trained and equipped to provide first aid and treat traumatic injuries (designated medic).
- b) Unless they are provided with appropriate protection, the designated medic and the equipment shall stay and put readily available but outside of the danger area.
- c) There shall be an established casualty evacuation plan and procedure and standby medical cover shall be available.
- d) There shall be a serviceable ambulance or vehicle fitted out to allow a medic to treat at least one stretcher borne casualty and transport the casualty safely to a hospital or medical facility.

8.2. Accident Response Requirements

The response to be provided in the case of an accident shall include:

- a) Stop disposals, make safe the prepared demolitions, carry out first aid and CASEVAC and call on back up medical aid.
- b) Inform the NMAC, UNMAS and NMAC sub office.
- c) Note all details pertinent to the eventual investigation.
- d) Mark and protect the accident scene.
- e) Render safe and repack all munitions and explosives that have been unpacked and prepared for disposals.
- f) Note the name of the casualty, time of the accident and details of injuries.
- g) Note the time of evacuation of the casualty.
- h) Consult NMAC about the destination for the evacuation.
- i) Notify NMAC of the destination for the evacuation vehicle and the estimated time of arrival.