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EXPLOSIVE ORDNANCE DISPOSAL RECOVERY OPERATIONS ON FIXED INSTALLATIONS

Edition C Version 1

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NATO LETTER OF PROMULGATION

28 February 2020

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Brigadier General, HUNAF

Director, NATO Standardization Office

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RECORD OF RESERVATIONS

CHAPTER	RECORD OF RESERVATION BY NATIONS

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.

RECORD OF SPECIFIC RESERVATIONS

[nation]	[detail of reservation]
ITA	Italian ARMY retains to define proper requirements and qualifications for personnel to be employed in EO search activities.
LVA	Latvian Armed Forces will use STANAG 2391 as basic reference document for EOD recovery operations on fixed installations, but cannot guarantee that the equipment and requirements will always and in every respect be in conformity with the STANAG 2391

Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.

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CHAPTER 1 INTRODUCTION

1.1 GENERAL

1. The term '*installation*' used in this publication is taken to include: the static buildings, facilities; airfields, ports, logistic and operational facilities of temporary or permanent nature required to support NATO operations and military capabilities.

1.2 THREAT

- 1. Enemy operations against NATO installations can be expected from the first day of hostilities, with continuing attacks as long as enemy forces possess the resources.
- 2. The Explosive Ordnance (EO)¹ and the Threat² it presents varies widely and the exact types of EO likely to be deployed against an individual installation is dependent upon:
 - a. The priority allocated by the enemy to that particular target.
 - b. The survivability measures afforded by NATO forces to that installation.
 - c. The geographical location of the installation.
- 3. The EO threat is therefore variable and obtainable from updated intelligence assessments, but any or all of the types of EO could be used against NATO installations. A comprehensive list of EO types is contained within AEODP-06³ (STANAG 2221).
- 4. The presence of unexploded explosive ordnance (UXO) may also be due to deliberate fuzing, which could include:
 - a. Short delay for penetration and cratering.
 - b. Long delay for harassment and interdiction.
 - c. Random delay for area denial and interdiction.

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¹ Explosive Ordnance: All munitions containing explosives, nuclear fission or fusion materials and biological and chemical agents. Source, notes: The English preferred term refers to explosive munitions collectively. Examples: bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket and small-arms munitions; all mines, torpedoes and depth charges, demolition charges; pyrotechnics; clusters and dispensers; cartridge and propellant-actuated devices; electro-explosive devices; improvised explosive devices and all similar or related items or components explosive in nature. (NATO Terminology Database, Record 7626)

² The term Explosive Hazard could, potentially, be confused with the UN hazard division classification assigned to explosives as they are packaged for transport, therefore the term Explosive Ordnance Threat is used throughout.

³ EOD Reports and Messages.

- d. Target activation for specific target such as vehicles/aircraft/ships or general harassment.
- e. Booby trap switches.
- f. Improvised fuzing or Initiation systems.
- 5. In addition some EO may not function as intended and be classified as UXO by malfunction. The percentage of UXO will vary by type; for example, sub-munitions (which could also be fitted with delayed action fuzes) may have a relatively high malfunction rate, particularly if falling on soft ground (e.g. at the edge of a runway).
- 6. Although nuclear weapons may pose a threat to certain installations, recovery operations from nuclear attacks are outside the scope of this publication.
- 7. Distance and physical barriers are primary methods of protecting personnel and equipment, but some ordnance items will present hazards such that protected, as well as unprotected, personnel will become casualties.

1.3 OBJECTIVES

- 1. The priority aim of all explosive ordnance disposal (EOD) recovery operations, whatever the installation, is to assist in the overall plan for the recovery of that installation such that it may undertake its primary operational role in the minimum possible time. After the operational priorities, and with time and logistics permitting, the secondary aim is to continue with EOD recovery operations as necessitated by the overall recovery plan of the installation.
- 2. Regardless of the facilities damaged, it is likely that only limited resources will be available for recovery actions whether they are of an engineering or EOD nature. Thus any recovery plan requires predetermined priorities based on the facility's Concept of Operations, reasoned assumptions and well integrated training. Since EOD resources may be moved from one installation to another it is essential that basic planning concepts and training are standardized. EOD procedures should also be standardized wherever possible, but actual techniques will vary when undertaken in such differing environments as an airfield, port or logistic depot.
- 3. Historic methods of countering the EO threat have tended towards an over reliance on specialists. In returning an installation to full operational capability following an EO event, consideration must be given by Commanders to employing suitably trained and equipped forces to conduct Counter-EO Threat actions ranging from 'mark and avoid' to 'destroy' but potentially short of the 'neutralise' capability of more specialist EOD assets. This concept of threat based decision-making is further explored in Chapter 4.
- 4. This publication is to provide basic planning concepts which may be utilized on a NATO basis to assist in EOD recovery operations and preparatory training.

1.4 ASSUMPTIONS

- 1. The following assumptions are made to provide a common scenario, however this is dependent on the number and type of munitions employed and there could be considerably less impact. The worst case scenario is presented:
 - a. The post strike environment is extremely hazardous and will remain so throughout recovery. UXO, both malfunctions and delay/influence fuzed, will be present. Detonation of some of these UXO can be expected at random times during recovery operations. Frequency will depend on the type of ordnance employed. Damage such as partially collapsed buildings, ruptured fuel lines, fallen power cables or fires will increase the hazards. Casualties should be expected.
 - b. The resources available to control or eliminate hazards will not be great enough to be simultaneously applied to all facilities. Operational priorities will dictate the sequence of work.
 - c. The hazards of EOD operations to other recovery personnel must be considered when concurrent activities are being conducted.
 - d. Withdrawal of personnel to a safe area or distance may not always be practical or possible during render safe procedures.
 - e. Recovery forces will only be used initially for actions which will result directly in the installation being able to undertake its primary operational role.
 - f. The Installation Commander will allocate priorities during recovery operations.
 - g. Recovery operations may have to be carried out in a chemical environment.

CHAPTER 2 EOD OPERATIONS

2.1 GENERAL

- 1. The disposal of EO by specialist and non-specialist assets requires a broad spectrum of EOD procedures and related equipment. The techniques will depend primarily upon the type of weapon used, the situation within the installation and the speed with which disposal operations must be mounted.
- 2. The capabilities to be provided by EOD forces will thus depend upon the type of threat the enemy poses to an installation. Typical capabilities related to anticipated threats are described separately below.
- 3. Scenarios can be developed that range from that where the personal risk to the EOD operator is not considered and where the detonation of the munition is unacceptable, to the more general case where the munition can be cleared remotely or command detonated.
- 4. It must be emphasised that an enemy will be aware that EOD countermeasures will be used against time delay and influence fuzed munitions. He can be expected therefore to use new fuzes, or variants of known fuzes, to negate the effectiveness of known countermeasures.
- 5. The most effective form of EO countermeasures are protective measures. The use of such protective measures may permit the Installation Commander to improve or expedite post attack actions.

2.2 DISPOSAL OF UNEXPLODED ORDNANCE

- 1. Scenarios may involve small items of ordnance which pose a threat to vital installations or inhibit movement of critical military resources, or influence, time delay or dual fuzed large calibre bombs with the capacity to cause considerable damage to facilities.
- 2. Procedures, therefore, can range from simple sand bagging and destruction in situ, to pick-up-and-carry-away for disposal or, in the case of large bombs, to fuze identification, gaining access, rendering safe and final disposal. These procedures require a trained EOD team with the necessary EOD equipment.
- 3. It is emphasised that during a conflict, an enemy will endeavour to use new weapons to provide a tactical advantage. These may therefore be 'first seen' items for which no established EOD procedures are available. For this reason, EOD teams must have a supporting capability for technical investigation to enable the identification and functioning of new fuzes to be quickly determined. Information will follow from this investigation to produce suitable EOD procedures or clearance techniques.

2.3 DISPOSAL OF SUB-MUNITIONS FOUND ON THE SURFACE

- 1. Recent years have seen the development of many new varieties of weapons that effectively interdict all aspects of military operations by seeding large areas with anti-personnel and anti-materiel sub-munitions. Delivery methods can distribute many thousands of sub-munitions on or around a target, each of which may be fuzed to function through the use of anti-disturbance fuzes, seismic/acoustic sensors, optical/magnetic sensors or random delay.
- 2. The magnitude of the task may necessitate the use of specialized disposal techniques. Hazards to personnel may be significant, especially in difficult terrain such as long grass, shrubbery or a rubble-strewn area.
- 3. Anti-materiel munitions may be functionally combined with an anti-personnel capability but their prime role is to defeat specific targets such as aircraft, supply vehicles, armoured vehicles, engineer equipment or specialist EOD vehicles. Modern munitions may have a stand-off or pop-up and aim capability. Disposal must therefore consider clearance over the lethal effects area of the weapon and not just the foot print of the weapon over the target.
- 4. It is obvious that disposal of sub-munitions becomes a complex EOD operation requiring the development of specialized tactics to permit speedy and safe results. Once munitions are detected it is vital to determine their functioning characteristics. It may be necessary to deploy EOD personnel in armoured vehicles to provide protection from randomly or command-detonated munitions.
- 5. A variety of EOD procedures may be employed when it is determined that munitions are of the anti-personnel type. Clearance blades, drag chains, flails or air/fluid jets in conjunction with armoured vehicles may be effective in open areas. However, in difficult terrain such as on or around buildings and among debris or craters, stand-off techniques such as projectile attack or other remote disposal methods may be required.
- 6. Specialized techniques such as the use of heavy armour plate clearance blades or stand-off weapons may be necessary when anti-materiel munitions are identified on the surface. In some cases specialized armoured sweeping systems may be required if pop-up or influence-fuzed munitions are identified. Influence-fuzed munition sweeping techniques are considered separately.
- 7. When clearing surface laid munitions by mechanical sweeping methods many munitions may not detonate, especially if they are delay armed or delay initiated. If residual numbers are small, these may be disposed of by rifle fire or other stand-off devices but if large numbers are involved it may be prudent to sweep them into previously prepared areas where their detonation would not pose a serious threat to the installation.
- 8. It must be emphasised that recovery operations after an attack upon an installation, will be hampered by munitions mixed with building and crater debris etc. It is thus essential to ensure that engineer equipment is suitably hardened and that personnel are adequately protected. EOD personnel should be on the scene during all recovery actions to dispose of

munitions as they are found, especially in any area where their non-disposal would pose a major threat to operations, equipment or personnel.

2.4 DISPOSAL OF INFLUENCE FUZED MUNITIONS

- 1. Influence fuzes may be used against specific targets such as armoured vehicles, radar installations, aircraft, shipping or personnel.
- 2. Influences which may activate a fuze include:
 - a. Large magnetic fields such as that produced by armoured vehicles or aircraft.
 - b. Small transitional magnetic fields produced by soft skinned vehicles.
 - c. Acoustic or seismic signatures of specific vehicles or aircraft.
 - d. Infra red emissions from vehicles or aircraft.
 - e. Radio frequency emissions and power transients connected with communications, navigation or on-board power supplies.
 - f. Optical effects.
 - g. Static electricity.
- 3. Modern munitions or sophisticated IEDs may use separate arming and firing influences to assist in target discrimination and negate simple sweeping techniques. The advent of microprocessor signature analysis techniques may make target specific influence fuzes relatively immune to sweeping, unless the target vehicle signature is accurately duplicated.
- 4. When influence sweeping techniques are used in disposal operations where there is a Category A situation, tactics should be modified to remove the risk of an inadvertent detonation of suspected influence fuzed items (See AEODP-10¹ (STANAG 2143) for Definition of Categories).

2.5 DISPOSAL OF BURIED BOMBS

- 1. Buried bombs may be located and either destroyed in situ or rendered safe and removed. If, in a Category A situation, the bomb must be prevented from detonating, EOD procedures compatible with the weapon/fuze combination must be employed.
- 2. Location of a buried bomb is possible with the use of a magnetic anomaly bomb locator. Once located, either a shaped charge may be fired to detonate or break up the bomb, or an access hole may be dug to gain access for further EOD action.

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¹ EOD Principles and Minimum Standards of Proficiency.

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- 3. Should anti-disturbance or influence fuzes be suspected, non-magnetic tools and shafting material may well be required and, depending upon the depth and soil conditions, the time involved may range from hours to days or even months.
- 4. Once the bomb is exposed it may be detonated or rendered safe and removed for disposal. Rendering safe of a particular fuze requires specialist techniques and equipment which will be determined when the fuze has been identified. Detailed procedures are given in either national or NATO publications. See AEODP-14¹ (STANAG 2369) for air dropped weapons.

¹ NATO EOD Publications Set (NEPS) – Identification and Disposal of Surface, Air and Underwater Munitions.

CHAPTER 3 PREPARATORY PLANNING

3.1 AIM

- 1. The aim of preparatory planning is to ensure the smooth integration of all available resources during training, pre-attack and post-attack operations, such that the installation will be able to undertake its primary operational role as soon as possible after attack.
- 2. The 4 elements likely to be involved in preparatory planning are:
 - a. Command staff.
 - b. Operational and logistic staff.
 - c. Repair organization.
 - d. EOD organization.
- 3. During any installation recovery planning it is essential that the needs, role and nature of the EOD tasks are understood by all 4 elements.

3.2 EOD PLANNING

- 1. In addition to any details in AJP-3.14¹ (STANAG 2528) and other local instructions the following additional items must be considered during the EOD planning stage:
 - a. Local Installation Recovery Instructions (LIRI).
 - b. Essential operational areas listed in order of priority.
 - c. Preparation of installation map with grid overlay.
 - d. Preparation of hazardous area overlays.
 - e. The maintenance and updating of the threat and vulnerability assessment (AJP-3.14, Chapter 3).
 - f. Reconnaissance and/or preparation of possible/potential ordnance disposal areas.
 - g. Location and availability of additional EOD stores within the installation including demolition material or mitigation materials. This may include potential

¹ Allied Joint Doctrine for Force Protection.

- ordnance disposal areas, locations within or near the installation to which EO can be moved for final disposal.
- h. Availability and type of communication facilities.
- i. Adequate provision for EOD specialist training within the installation, both in isolation, and involving all elements of the recovery operation.

3.3 LOCAL INSTALLATION RECOVERY INSTRUCTIONS (LIRI)

- 1. LIRI are the responsibility of the Installation Commander who will prepare contingency plans for the post strike recovery of the installation.
- 2. It is the responsibility of the commander, in conjunction with an appropriate EOD Staff Officer, to ensure that the EOD threat is fully appreciated and that the EOD recovery plan is integrated into the LIRI.
- 3. LIRI should also include details of special communications instructions (e.g. areas where radio or mobile phone transmission is not permitted).

3.4 ESSENTIAL OPERATIONAL AREAS

- 1. Priorities must be dictated which permit the deployment of EOD resources only to those locations directly essential to the primary operational role of the installation. Although exact locations cannot always be listed, a list of essential facilities and areas in order of priority can and must be prepared.
- 2. Post event tasking of EOD teams will thus be restricted to those areas listed as priority areas. The exact order of priority will be a command decision made after the attack and following initial reconnaissance.

3.5 PREPARATION OF INSTALLATION GRID

1. It is essential to have accurate reports of damage and EO to ensure rapid tasking of EOD and repair teams. This accuracy must also extend to exact locations of EO. In many installations it will be impossible to use permanent features as accurate reference points. All LIRI should include copies of installation maps marked with a suitable grid. This common map is to be used by all involved in recovery operations to simplify and speed up reporting.

3.5.1 Hazardous Area Overlays

- 1. EOD teams may be required to operate in installations with which they are not completely familiar and consequently may be unable to recognize hazardous or potentially hazardous facilities. Similarly there is a need to accurately record areas made hazardous as a result of the attack.
- 2. All LIRI must include updated overlays which show hazardous and potentially hazardous areas. These overlays are to be further updated following an attack.

3.6 EQUIPMENT WITH SECONDARY EOD ROLE

1. This subject is dealt with more fully in Chapter 9 but clearly the equipment available for EOD is related to the type of installation involved and the resources available.

3.7 LOCATION AND AVAILABILITY OF EOD RELATED MATERIAL

- 1. Although an EOD team is equipped with its own standard and specialist demolition equipment, many of the EOD procedures used during an EOD recovery operation depend upon basic demolition material.
- 2. Thus any demolition stores held within the installation should be accurately recorded as to quantity and location and this record updated as necessary. This is in addition to any normal stores accounting procedures which may not be readily available to EOD or recovery teams.
- 3. Availability of mitigation materials, such as sand bags or shoring timbers should be considered and listed for the EOD Operator. Additionally, local commercial sources should be considered.

3.8 ALTERNATIVE INSTALLATION OPERATIONAL METHODS

- 1. All installations operate to their own Standard Operating Procedures (SOPs) designed to allow the installation to operate at the highest possible degree of efficiency. However, after an attack the most efficient recovery programme may not always be the recovery of the original method of operation.
- 2. Installation staff should consider alternative operational methods. These methods may be less efficient but might enable operations to recommence sooner with less recovery effort. Examples include Minimum Operating Strip in the case of airfields or alternative loading methods for ports and harbours.

3.9 TRAINING

1. Training of all Installation Recovery Forces is an essential aspect of planning and is dealt with in detail at Chapter 8. However, those installations without a dedicated EOD force must ensure that appropriately qualified personnel carry out EOD training within the installation in order to familiarize all recovery personnel with the EOD problem.

CHAPTER 4 COMMAND, CONTROL AND COMMUNICATIONS

4.1 INTRODUCTION

- 1. This publication is primarily concerned with EOD recovery operations. However, it is necessary to be aware of the installation's recovery organization and appreciate how the EOD organization interacts with other essential activities.
- 2. During the post-event phase, the Installation Command and Control (C2) organization will be directing and integrating all available resources toward the Installation's primary task and restoring its operational capability. EOD will be only one of many problems facing the Installation Commander and his staff. It is essential that there is a good information flow to enable the Commander to aware of the current EOD situation and to provide EOD Units with the Commanders priorities.
- 3. The Installation Commander is responsible for establishing priorities and ensuring that post-event recovery work is undertaken as soon as possible. The Commander will ensure that guidance and instructions on how to establish and maintain a Damage Control Centre (DCC) are well known by the relevant staff. In a small installation, the Commander may directly control the activities of the DCC, but in a large installation this responsibility is more likely to be delegated, though remaining available in case required. The DCC staff should include an EOD Cell responsible for tasking of EOD assets.

4.2 **RESPONSIBILITIES**

4.2.1 The Installation Commander.

- 1. The Installation Commander is responsible for the overall Installation Recovery Plan and its implementation. From the EOD aspect, he must ensure that preparatory EOD planning, as outlined in Chapter 3, is completed and, in particular, that:
 - a. All installation personnel are aware of the threat and receive basic EO awareness training, especially for IEDs.
 - b. Integration training is carried out between installation staff and EOD personnel.
- 3. The EOD response requires threat-based decision-making based on an effective threat assessment, understanding of risk appetite, and availability of suitable assets to provide an appropriate response. The decision-making framework needs to be simple and intuitive in order to empower agile and effective action to counter EO threats. The model at Figure 1 depicts Threat versus Tempo as the key determinants of Risk Appetite, which should shape any course of action.

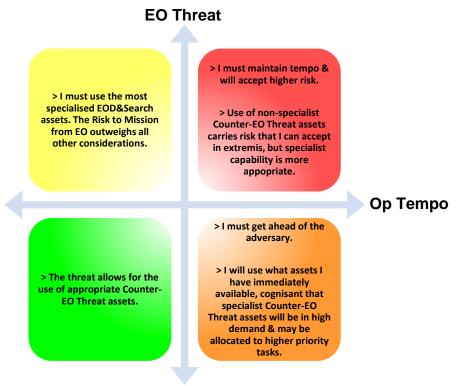


Figure 1. Counter-EO Threat Risk Appetite Matrix

4.2.2 The DCC Commander.

1. The DCC is responsible for monitoring and directing all recovery operations on behalf of the Installation Commander. This includes passing the Installation Commander's priorities and allocating EOD Units based upon the LIRI.

4.2.3 Damage Assessment and Repair Teams.

1. Damage assessment and Repair Teams will comprise representatives from the installation repair force. They will be tasked by the DCC to assess and conduct the repair work required, in areas considered to have the greatest potential for rapid restoration of the installation's capability. They may detect and report additional details and locations of suspected EO.

4.2.4 CBRN.

1. If there is a CBRN threat appropriately equipped detection teams will be responsible for immediately reporting the presence, types and locations of CBRN agents and suspected EO. They will also be responsible for marking contaminated areas and recommended routes for follow-on teams.

4.2.5 EOD Teams.

1. EOD teams will be tasked by the EOD Cell within the DCC and will confirm the location and types of suspected EO and dispose of them in accordance with the priorities allocated by the DCC.

4.2.6 EOR or Military Search Teams.

1. EOR or Military Search Teams will be tasked to search pre-identified and non-overlapping areas. After an attack, each team will search its assigned area for damage, suspected EO and evidence of chemical attack, and report to the DCC.

4.3 COMMUNICATIONS

1. All of the above functions rely on adequate communication. In certain EO situations, electro-magnetic transmissions including EOD ECM may be incompatible with the other activities on the installation and provision for this eventuality must be considered.

CHAPTER 5 RECONNAISSANCE

5.1 INTRODUCTION

- 1. The priority aim of the reconnaissance phase of an EOD Incident, referred to as Explosive Ordnance Reconnaissance (EOR), is to gain speedy and accurate post-event information on EO which will enable the EOD Commander, in coordination with the DCC Commander, to evaluate the threat of this ordnance against the installation.
- 2. It is therefore necessary, depending on the type and the size of the installation, that trained EOR or Search teams be organized and integrated in the overall Installation Recovery Plan.

5.2 ORGANIZATION

1. Sufficient EOR or Search teams should be organized to ensure that reconnaissance of all critical areas of the installation is carried out quickly (e.g. access routes, mission essential facilities and stockpiled mission essential materials).

CHAPTER 6 REPORTING PROCEDURES

6.1 INTRODUCTION

- 1. The primary aim of all EOD recovery operations is to assist in the overall plan for the recovery of an installation to enable it to undertake its primary operational role in the minimum possible time. However, no recovery plan can be made by the Commander and staff without accurate and speedy post-attack information being made available.
- 2. This chapter considers the format to be used when reporting EOD related information, thus ensuring that all reports, from whatever source and however passed, will reach the DCC in the same easily understood format.
- 3. Priority should be given to using the NATO EOD Reporting systems as described in AEODP-06 to reduce transmission times and avoid misunderstanding, in addition to any requirements of the Commander's Local Installation Recovery Instructions (LIRI).
- 4. Installation personnel must be capable of making an initial EO report. In the case of the EOR or Search teams, they must also be capable of making more detailed reports leading to the identification of the EO.
- 5. EOD teams must be capable of:
 - a. Identification and reporting of EO, Render Safe Procedures (RSPs) used and the results of these RSPs.
 - b. Reporting the details of unusual or unknown items of EO of possible intelligence significance.

CHAPTER 7 DEPLOYMENT AND SUPPORT OF EOD TEAMS

7.1 INTRODUCTION

1. Recovery operations on fixed installations depend on the rapid disposal of EO in all areas considered essential to the primary operational role of the installation.

7.2 DEPLOYMENT OF EOD TEAMS

- 1. If there are no EOD teams available at the installation concerned, or if the EOD teams assigned to, or indigenous to, the installation are unable to deal with the task within an acceptable time, outside assistance is to be requested. Following the initial assessment, the Installation Commander may call for EOD support through National/NATO chain of command in accordance with ATP-3.18.1 (STANAG 2282).
- 2. The EOD Co-ordination Cell (EODCC) will validate the request and assign EOD Units and transport (e.g. airlift) as appropriate or request EOD assistance from adjacent formations if there is no organic capacity available.
- 3. Where high risk is acceptable, and tempo is the dominant factor, Counter-EO capabilities immediately available can be deployed, without recourse to highly specialized EOD assets. For example, where an operational requirement exists to restore airfield operating surfaces following bombing with precision guided munitions or indirect fire, risk appetite and tempo are likely to be high. Projectile attack of EO by organic Air Force EOD assets might be authorised, followed by emergency operating surface repairs.
- 4. The same airfield, being cleared for use by civilian logistic aircraft in several days' time will allow a slower and more painstaking approach, using low-order techniques and protective works to minimise damage.

7.3 RESPONSIBILITIES

- 1. The deployment of EOD teams and the coordination of all support to the assigned EOD teams within the installation is the responsibility of the Installation Commander as described in Chapter 4.
- 2. All EOD reinforcements are to be assigned to the existing installation EOD organization. Where no such organization exists, the commander of the allocated EOD teams is to report to the DCC Commander to obtain the following information:
 - a. The local situation.
 - b. Measures taken to protect personnel and vital facilities.
 - c. Requirements of the installation to enable it to achieve its operational role.

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¹ Allied Tactical Publication for EOD.

- 3. When there is no EOD capacity on site, the commander of the reinforcing EOD unit is to make his own reconnaissance to determine if:
 - a. The pre-planned procedures are adequate or must be changed as a result of his professional advice.
 - b. The measures taken to protect personnel and vital facilities are adequate.
 - c. The assumed time for the completion of the EOD operation is reasonable.
- 4. The EOD Unit Commander is to report to the DCC Commander if the precautions taken are insufficient and make further recommendations.
- 5. The DCC Commander is responsible for the implementation of protective measures. Decisions are to be approved by the Installation Commander or his delegated representative.

7.4 AREA OF OPERATIONS

- 1. Areas of operation for EOD are to be determined in coordination with the Incident Commander. This area of operation is divided into:
 - a. The exclusion area with the incident site and the control point.
 - b. The support area with the command post of the local support (auxiliaries, equipment and material) and, if appropriate, CBRN decontamination point.
- 2. The exclusion area is an area of maximum danger. Only those personnel absolutely necessary are allowed to remain within this area. Only the EOD Team Leader may issue orders within this area.
- 3. The Incident Commander is responsible for the support area and the cooperation between the EOD and the support forces.

7.5 SUPPORT

1. EOD units are usually organized into small mobile detachments with little external support other than of an EOD nature. It is essential if they are to retain their flexibility to respond to any incident, that they be granted a high priority for support from static installations or higher formations.

CHAPTER 8 INTEGRATED TRAINING AND EVALUATION

8.1 Training

1. The Installation Commander, in coordination with national authorities and or NATO Commands, is to prepare and implement Installation training plans. The style and frequency of the training depends on the role, geographic location and the anticipated level of local threat.

8.1.1 Integrated Training

1. Integrated Training is necessary so that all specialist interfaces between EOD Units and other elements such as Installation C2, firefighting, CBRN defence and security services are well practised and understood.

8.1.2 Specialist Team Training

1. As noted in Chapter 4 paragraph 4.2.2, the specialist EOD Units required to support recovery operations on a particular installation are to be made aware of the specific hazards of the installation and appropriated details published in the LIRI.

8.1.3 EO Awareness Training

- 1. General training in EO for all installation personnel includes:
 - a. Unexploded ordnance recognition.
 - b. Sabotage device recognition.
 - c. IED recognition.
 - d. Unexploded ordnance hazards and safety precautions.
 - e. Unexploded ordnance marking procedures.
 - f. Bomb crater recognition features.
 - g. General understanding of the Installation Recovery Organization.

CHAPTER 9 SUPPORT REQUIREMENTS

9.1 EOD EQUIPMENT

1. Specialist EOD equipment will normally be provided for EOD teams in accordance with national scales derived from AEODP-07 (STANAG 2897). However, a wide range of additional equipment, depending upon the size and role of the installation and its assessed threat, may be required to support installation dedicated EOD teams during the recovery. The need for this additional equipment may be sponsored by the Installation Commander in conjunction with his EOD advisor but it will usually be staffed at a higher level.

9.4 SUPPORT TO EOD ASSETS

1. The Installation Commander is to consider the supporting requirements, both in terms of materiel and personnel, to permit effective EOD action. Such support, e.g. in provision of cordon troops, may be resource intensive, particularly early in an EOD task or where multiple EO is present. Prioritization and commitment of such resource is vital, however, if EOD assets are to be permitted the freedom to operate effectively. Actions such as the temporary ceasing of electromagnetic emissions in the vicinity of an EO task may require bold and timely decision making, particularly when apparently detrimental to the immediate operational output of the installation.

¹ EOD Equipment Requirements and Equipment.

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