



**MILITARY COMMITTEE LAND STANDARDIZATION BOARD (MCLSB)**

06 January 2009

NSA(ARMY)0008(2009)EOD/2389

MCLSB

**STANAG 2389 MC EOD (EDITION 2) - MINIMUM STANDARDS OF PROFICIENCY FOR TRAINED EXPLOSIVE ORDNANCE DISPOSAL PERSONNEL**

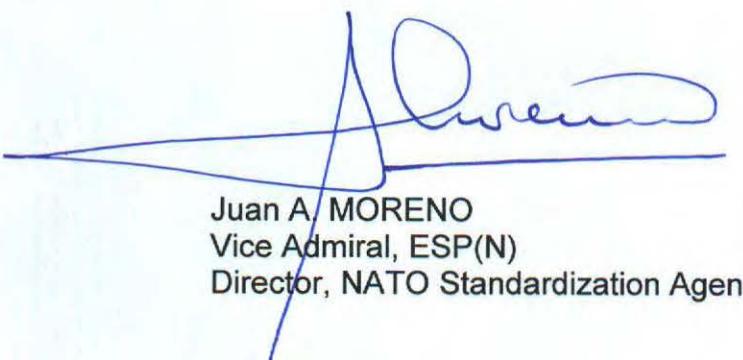
References:

- a. MAS(ARMY)210-EOD 2389 (EDITION 1), dated 14 December 1987
- b. NSA(ARMY)0426(2007)EOD/2394, dated 11 June 2007

1. The enclosed NATO Standardization Agreement which has been ratified by nations as reflected in the NATO Standardization Document Database (NSDD), is promulgated herewith.
2. The references listed above are to be destroyed in accordance with local document destruction procedures.

ACTION BY NATIONAL STAFFS

3. National staffs are requested to examine their ratification status of the STANAG and, if they have not already done so, advise the MCLSB, NSA, through their national delegation as appropriate of their intention regarding its ratification and implementation.



Juan A. MORENO  
Vice Admiral, ESP(N)  
Director, NATO Standardization Agency

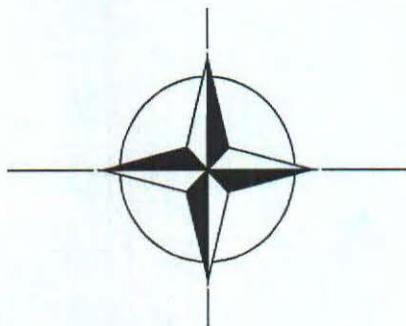
Enclosure:

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**NORTH ATLANTIC TREATY ORGANIZATION  
(NATO)**

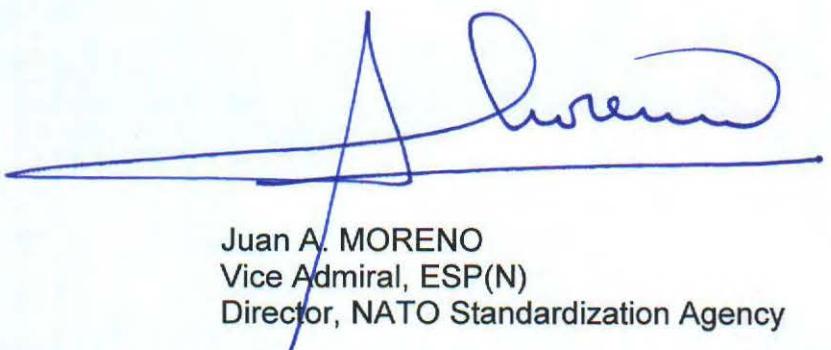


**NATO STANDARDIZATION AGENCY  
(NSA)**

**STANDARDIZATION AGREEMENT  
(STANAG)**

**SUBJECT: MINIMUM STANDARDS OF PROFICIENCY FOR TRAINED EXPLOSIVE  
ORDNANCE DISPOSAL PERSONNEL**

Promulgated on 06 January 2009

A blue ink signature of the name "Juan A. Moreno" is written in a cursive, flowing style. The signature is positioned above a line of text that identifies the person.

Juan A. MORENO  
Vice Admiral, ESP(N)  
Director, NATO Standardization Agency

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RECORD OF AMENDMENTS

No.	Reference/date of Amendment	Date Entered	Signature

EXPLANATORY NOTES

AGREEMENT

1. This NATO Standardization Agreement (STANAG) is promulgated by the Director NATO Standardization Agency under the authority vested in him by the NATO Standardization Organisation Charter.
2. No departure may be made from the agreement without informing the tasking authority in the form of a reservation. Nations may propose changes at any time to the tasking authority where they will be processed in the same manner as the original agreement.
3. Ratifying nations have agreed that national orders, manuals and instructions implementing this STANAG will include a reference to the STANAG number for purposes of identification.

RATIFICATION, IMPLEMENTATION AND RESERVATIONS

4. Ratification, implementation and reservation details are available on request or through the NSA websites (internet <http://nsa.nato.int>; NATO Secure WAN <http://nsa.hq.nato.int>).

FEEDBACK

5. Any comments concerning this publication should be directed to NATO/NSA – Bvd Leopold III - 1110 Brussels - BEL.

NATO STANDARDISATION AGREEMENT  
(STANAG)

MINIMUM STANDARDS OF PROFICIENCY FOR  
TRAINED EXPLOSIVE ORDNANCE DISPOSAL PERSONNEL

Annexes:

- A. Minimum Standards of Proficiency for an Explosive Ordnance Reconnaissance Agent.
- B. Minimum Standards of Proficiency for a Conventional Munitions Disposal Operator.
- C. Minimum Standards of Proficiency for a Biological and Chemical Munitions Disposal Operator.
- D. Minimum Standards of Proficiency for an Improvised Explosive Device Disposal Operator
- E. Minimum Standards of Proficiency for an Underwater EOD Operator.
- F. Minimum Standards of Proficiency for an Explosive Ordnance Disposal Staff Officer.

Related Documents:

STANAG 2143 EOD - Explosive Ordnance Reconnaissance/Explosive Ordnance Disposal(EOR/EOD)

STANAG 2377 EOD - EOD Roles, Responsibilities, Capabilities and Incident Procedures when Operating with non EOD Trained Agencies and Personnel

STANAG 2897 EOD - EOD Equipment Requirements and Equipment – AEODP-7

AIM

1. The aim of this agreement is to establish minimum standards of proficiency for trained Explosive Ordnance Reconnaissance (EOR) agents, Explosive Ordnance Disposal (EOD) operators and specialist EOD Staff Officers and to provide guidance to commanders on EOD operators' capabilities.

AGREEMENT

2. Participating nations agree to adopt the minimum standards of proficiency set out in Annexes A-F within their respective EOD organisations. Nothing in this agreement should discourage nations from exceeding the agreed standards where this is feasible.

3. Not all EOD operators and staff officers need be proficient in all the categories shown at Annexes A-F, but where any operator is trained in a specific category that training should meet the minimum standard of proficiency shown in the respective Annex.

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4. Minimum standards of proficiency for assistants to trained operators are not given as it is a national responsibility to provide EOD operators with their intimate support.

5. Nuclear Weapon Disposal and Improvised Nuclear Device Disposal are not included in this STANAG.

IMPLEMENTATION OF THE AGREEMENT

6. This STANAG is implemented when a nation has issued the necessary orders or instructions to the Forces assigned to NATO prescribing the adoption of the minimum standards of proficiency contained herein.

MINIMUM STANDARDS OF PROFICIENCY FOR  
AN EXPLOSIVE ORDNANCE RECONNAISSANCE AGENT

Must:

1. Understand own national and NATO Explosive Ordnance Reconnaissance (EOR)/Explosive Ordnance Disposal (EOD) organisations, their tasks and importance.
2. Be able to distinguish explosive objects from non-explosive objects.
3. Be aware of the effects of explosive.
4. Identify EO generically by type, origin and principal components and state their hazards.
5. Be able to describe precisely an item of unknown UXO.
6. Be able to interview a witness with an effective questioning technique.
7. Be able to liaise with and brief relevant agencies such as the Incident Commander, I/C cordon, emergency services etc.
8. Be able to safely undertake an accurate search to locate surface and buried UXO.
9. Be able to recognise the signs that may indicate the presence of surface and buried UXO E.g. entry holes, camouflets, building damage, disturbance, tail fins etc.
10. Be able to mark the location of UXO and associated danger areas.
11. Be able to determine damage radii and safety distances for known munitions and estimate for unknown munitions.
12. Be able to advise on risks of UXO to personnel and property.
13. Be able to advise on evacuation and protective measures for an UXO incident and on the initial evacuation and protective measures for CB incidents.
14. Be able to recognise suspect IED and advise on immediate actions.
15. Be aware of and understand the categories of EOD incidents.

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16. Be able to advise on initial incident EOD category.
17. Be familiar with EOD and EOR reporting procedures and be able to raise reports in accordance with AEODP-6 and own national SOPs.
18. Be familiar with EOD Tactics Techniques & Procedures (TTP) in order to be able advise the EOD operator.
19. Be familiar with own national and NATO EOD publications.

MINIMUM STANDARDS OF PROFICIENCY FOR  
A CONVENTIONAL MUNITION DISPOSAL OPERATOR

GENERAL

Must:

1. Possess the minimum standards of proficiency for an EOR agent as laid down in Annex A.
2. Be familiar with own national and NATO EOD publications in particular ATP-72, AEODP-1, AEODP-2, NEPS, AEODP-5, AEODP-6, AEODP-7, STANAGS 2143, 2377. Be aware of the existence of ATP-73 (Search) and AEODP-3A (IEDD).
3. Be familiar with the tasks and working methods of a national EOD Coordination Cell and a Multinational EOD Coordination Cell (MNEODCC)
4. Understand in depth the capabilities and limitations of own national CMD forces, including responsibilities, competencies, equipment, support requirements, tactics, techniques and procedures. Be aware of the capabilities of own national IEDD forces and the EOD forces of other nations.
5. Be able to provide specialist CMD technical advice in accordance with Annex F paragraphs 6.b, 6.h & 6.i.
6. Be able to advise on the sustainment and readiness of a CMD team.
7. Be able to identify CMD capability gaps and advise on requirements.
8. Be able to advise and assist in determining EOD requirements and priorities.
9. Understand the prevailing EOD C2 structure and states of command (OPCOM, OPCON, TACOM, TACON).
10. Be aware of the current EOD threat assessment, including threat weapons (conventional and CBRN) and methods of IED attack.
11. Be able to advise on the local impact of conventional munitions on operations.
12. Be aware of the requirement to gather relevant intelligence and preserve forensic evidence.

13. Be able to interpret CMD related intelligence.
14. Be familiar with and able to operate national, in service specialised EOD decision support IT system or equipment.

RECONNAISSANCE

Must:

15. Be able to collate and evaluate all available information in order to formulate an accurate threat assessment and RSP.
16. Advise on the type and positioning of protective works, site remediation and EO recovery.
17. Be able to estimate the size and position of buried munitions.

ACCESS

Must:

18. Advise on and supervise the mechanical excavation of buried munitions.
19. Be able to operate and maintain own nation in-service remotely controlled vehicles and their associated equipment.

IDENTIFICATION

Must:

20. Be familiar with and able to employ military explosives and accessories.
21. Be able to identify by type commercial demolition stores and explosives.
22. Using relevant reference sources positively identify conventional EO (including BC munitions and pyrotechnics), fuses and other components, determine their method of operation and state their hazards.
23. Be able to operate in-service EOD radiographic equipment and obtain a radiograph, aware of the radiation hazards.
24. Be able to interpret a radiograph.

RENDER SAFE AND/OR DISPOSAL PROCEDURES

Must:

25. Be able to prepare, use and maintain in-service CMD tools and equipment.
26. Be able to conduct CMD while wearing protective clothing.
27. Be able to select and use EOD equipment to neutralise, disrupt or remove a fuse.
28. Be able to disrupt conventional munitions using deflagration techniques.
29. Be able to dispose of conventional munitions, including pyrotechnics, by detonation or burning.
30. Be able to identify a suitable disposal area and exercise range safety procedures during disposal operations.
31. Be able to gain access to and remove the main explosive filling of conventional munitions.
32. Be able to conduct bulk disposal of multi-item conventional munitions.
33. Be able to identify liquid propellants and know their hazards and disposal procedures.
34. Be able to identify depleted uranium munitions and know their hazards and disposal procedures.

MINIMUM STANDARDS OF PROFICIENCY FOR  
A BIOLOGICAL AND CHEMICAL MUNITION DISPOSAL OPERATOR

Must:

1. Possess the minimum standards of proficiency for a CMD operator as laid down in Annex B.
2. Be familiar with the chemical and toxic properties of biological and chemical agents.
3. Be able to carry out a biological and chemical munition reconnaissance.
4. Be able to identify biological and chemical munitions.
5. Be able to use national equipment to detect free chemical agents.
6. Be able to define chemical agent identity by generic type, volatility and duration of effectiveness.
7. Be familiar with the effects of chemical agents.
8. Be able to carry out personal chemical and biological protection.
9. Understand the influence of weather conditions and terrain upon chemical agents.
10. Be able to define the initial extent of a chemical hazard area.
11. Understand the theory of decontamination and apply selected decontamination procedures.
12. Be able to advise on the setting up and supervision of an Emergency Personal Decontamination Station (EPDS).
13. Be able to conduct all Biological and Chemical munitions disposal procedures while wearing specialist protective clothing.
14. Be able to carry out leak sealing and packaging procedures.
15. Be able to identify a chemical munitions disposal area and prepare a disposal site.
  
16. Be able to advise on and safely dispose of limited quantities of chemical munitions by venting, neutralisation, burning or detonation, acting within prevailing environmental

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regulations and theatre SOPs. (This does not refer to bulk disposal of large quantities of chemical munitions).

17. Be able to provide specialist BCMD technical advice in accordance with Annex F paragraphs 6.j.

MINIMUM STANDARDS OF PROFICIENCY FOR  
AN IMPROVISED EXPLOSIVE DEVICE DISPOSAL (IEDD) OPERATOR

Must:

1. Possess the minimum standards of proficiency for an EOR agent as laid down in Annex A.
2. Be aware of the current EOD threat assessment and the possible methods of IED attack.
3. Be aware of the responsibilities for IED disposal.
4. Be familiar with the components, methods of construction and operation of IED.
5. Be able to identify by type commercial demolition stores and explosives.
6. Be able identify by type military demolition stores and explosives.
7. Be familiar with the composition, appearance and hazards of home made explosives.
8. Be aware of the special problems associated with the different types of IED and be able to apply appropriate techniques and procedures.
9. Be able to operate and maintain national in-service IED disposal diagnostic equipment.
10. Be able to operate and maintain national in-service radiographic equipment, interpret radiographs and be aware of radiation hazards.
11. Be able to operate and maintain national in-service remotely controlled vehicles and their associated equipment.
12. Be able to prepare, use and maintain national in-service IEDD equipment.
13. Be able to conduct IEDD while wearing protective clothing.
14. Be able to collate and evaluate all available information in order to formulate an accurate EOD threat assessment and RSP for an IED.

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15. Be able to advise on risks, evacuation and protective works for an IED incident.
16. Be able to conduct a vehicle, room or building search.
17. Be familiar with and able to use any specialised in-service IED communication equipment.
18. Be able to perform render safe procedures on an IED using remote or manual methods as necessary.
19. Be familiar and be able to take appropriate action for a CBRN IED in accordance with national requirements and regulations.
20. Be aware of and understand the requirements for gathering relevant intelligence and preserving forensic evidence.
21. Be able to interpret IED related intelligence.
22. Be familiar with relevant own national and NATO EOD publications, in particular ATP-72, AEODP-3A, AEODP-6, ATP3, STANAG 2377 and ATP-73. Be aware of the existence of AEODP-1, AEODP-2, AEODP-7 and STANAG 2143.
23. Be able to advise on the sustainment and readiness of an IEDD team.
24. Understand the prevailing EOD C2 structure and States of Command (OPCOM, OPCON etc.)
25. Be able to identify IEDD capability gaps and advise on requirements.
26. Be able to provide specialist IEDD technical advice in accordance with Annex F paragraphs 6.d, 6.e, 6.f, 6.g, 6.l
27. Be able to advise on the local impact of IED on operations.
28. Be familiar with and able to operate national, in-service specialised EOD decision support IT system or equipment.
29. Be familiar with the tactics, techniques and procedures for the use of ECM equipment in support of IEDD.

MINIMUM STANDARDS OF PROFICIENCY FOR  
AN UNDERWATER EOD OPERATOR

Must:

1. Possess the minimum standards of proficiency for a CMD operator as laid down in Annex B.
2. Be able to carry out the reconnaissance, identification, render safe, recovery and disposal of EO underwater down to the maximum operating depth of national clearance (Explosive Ordnance Disposal) diving equipment.

RECONNAISSANCE

Must:

3. Be able to supervise and undertake an accurate search to locate underwater EO by manual, acoustic and magnetic means, considering appropriate influence precautions. This includes EO attached to jetties, ships and other underwater structures, and EO on or tethered to the seabed or buried within it.
4. Be aware of and able to advise on the damage radii of EO underwater.
5. Be available to advise on the risks of underwater UXO to ships, underwater structures and the littoral.

ACCESS

Must:

6. Be able to advise on and supervise all EOD and EOR diving tasks.
7. Be fully conversant with the operation of national clearance (EOD) diving and remote reconnaissance equipment and associated procedures.

IDENTIFICATION

Must

8. Be able to conduct applicable EOR tasks listed at Annex A underwater.

RENDER SAFE AND/OR DISPOSAL PROCEDURES

Must:

9. Be able to prepare, use and maintain specialist tools and equipment for EOD underwater.
10. Be able to disrupt, neutralise and render safe UXO underwater using appropriate techniques.
11. Be able to advise on all aspects of EOD and Search underwater.
12. Be familiar with and able to advise on current national tactics, techniques and procedures for underwater force protection (UWFP).
13. Be able to advise on and conduct the recovery of underwater EO for technical investigation.
14. Understand and be able to advise on the effects of EO detonating underwater, including measures to mitigate those effects on ships and structures.

ANNEX F TO  
STANAG 2389  
(Edition 2 )

STANDARDS OF PROFICIENCY FOR AN EXPLOSIVE ORDNANCE DISPOSAL STAFF OFFICER

1. This annex details the standards of proficiency required of a staff officer working in a Headquarters EOD Cell, responsible for providing EOD advice to the Commander and tasking and supporting EOD assets. The Annex covers only those skills specific to EOD: it is assumed that the staff officer will have basic staff skills<sup>1</sup> and an understanding of how a HQ is organised and functions and their own national policies.
2. Those competencies labelled “essential” are considered achievable for a general staff officer with suitable EOD familiarisation training - such as the NATO EOD Staff Officers’ course – and the minimum standard that nations should aim for. Ideally, EOD Staff Officers should also be proficient in the “desirable” skills. Those competencies labelled as specialised would normally be provided by a subject matter expert qualified as an operator in accordance with Annexes A-E of this STANAG.
3. The Commander should ensure all competencies are represented somewhere within the EOD organisation. In an ideal situation, all the skills would be found at each staff level (Higher, Intermediate and National) but this may not be possible or necessary. However, sufficient expertise should be contained within each staff element (i.e. cell) to ensure that at each level all the tasks in the principal Staff Functions J1-J9 (Annex B1-B4 of ATP-72) can be achieved. In most cases it is unlikely that a single person will have all the skills necessary; several staff officers will generally be needed to ensure all competencies are covered.

Essential

4. As a minimum, the NATO EOD Staff Officer should:
  - a. Be familiar with and understand ATP 72 – Inter-service EOD Operations on Multinational Deployments.
  - b. Be familiar with and understand the tasks of an EOD Staff Element across the principal Staff Functions J1-J9 (Annex B1-B4 of ATP-72).

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<sup>1</sup> Staff skills such as the ability to draft orders, to conduct an estimate, to plan, to brief, to coordinate etc.

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- c. Be familiar with and understand the capabilities of EOD forces, including responsibilities, competencies, equipment, interoperability and support requirements (STANAGs 2377, 2389, AEODP-7, AEODP-3A); and sufficiently to know where to source the specialised advice detailed at Paragraph 6 below.
- d. Understand the states of command (OPCOM, OPCON, TACOM, TACON) and specifically how they are applied in an EOD C2 structure.
- e. Be familiar with current NATO and own National EOD publications.
- f. Be aware of the current threat assessment, including threat weapons (conventional and CBRN) and methods of IED attack.
- g. Be able, if necessary with specialist advice, to conduct a threat analysis and advise on the impact of UXO on operations (this could include force protection and counter terrorist operations).
- h. Be able to prioritise and plan, if necessary with Subject Matter Expert advice, EOD and EOR operations.
- i. Be familiar with EOD tasking procedures (ATP-72, AEODP-6).
- j. Have a generic understanding of EO by type (family) and the hazards they pose to EOD and non-EOD forces and civilians.
- k. Understand the types of EOD incidents and be able to task appropriate EOD assets to them.
- l. Understand and be able to advise on the ethos that drives EOD; that is, the need to balance risk against operational imperative across the spectrum of conflict.
- m. Understand and advise on the application of EOD Categories A, B, C, & D (STANAG 2143).
- n. Be familiar with the sequence of events of an EOD task (STANAG 2377).
- o. Understand and be able to apply the NATO EOD Message and Reporting System (AEODP-6).
- p. Be familiar with EOD terminology (AAP-06).
- q. Be aware of the requirement to gather relevant intelligence and preserve forensic evidence, considering the threat to forces involved.
- r. Be able to collate and disseminate EOD related intelligence.
- s. Be able to advise on EOD Rules of Engagement.

Desirable

5. It is desirable that the EOD Staff Officer should also:
  - a. Be able to advise on the sustainment and readiness of EOD forces.
  - b. Be able to advise on capability gaps and requirements.
  - c. Be able to interpret EOD related intelligence.
  - d. Be familiar with the tasking procedures for specialist assets in support of EOD operations.
  - e. Be aware of the EODTIC, IMSMA, national and international databases and the service they provide.
  - f. Be aware of the existence and understand the roles of UN, national and non-governmental organisations (e.g. humanitarian demining organisations) and their relation to military EOD forces.
  - g. Be familiar with and able to operate any specialised EOD decision-support IT system/equipment.
  - h. Have a minimum proficiency in English language proficiency to Standard Language Profile (SLP) 3332 in accordance with STANAG 6001, supplemented by EOD terminology (AAP-06).

Specialised

6. If not an expert in his/her own right, a NATO EOD Staff Officer should be aware of the following specialist competencies and where to call on them in order to provide appropriate advice to the Commander. The expertise in these specialised areas would normally be provided by subject matter experts qualified as operators in accordance with Annexes A-E of this STANAG:
  - a. Military Search tactics, techniques and procedures (ATP-73).
  - b. CMD tactics, techniques and procedures, including EOR (see Annexes A & B).
  - c. Underwater munitions disposal and the tactics, techniques and procedures for EOD underwater (see Annex D).
  - d. IEDD tactics, techniques and procedures (See Annex C).
  - e. IED trends and their impact (See Annex C).
  - f. Special IEDD equipment.
  - g. The preservation and collection of forensic evidence.

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- h. Protective works, mitigation and evacuation.
- i. Final disposal of large stockpiles of EO.
- j. Biological and Chemical EO Disposal.
- k. Radiological and Nuclear EO Disposal.
- l. CBRN IED matters.
- m. Conduct and management of a technical investigation team.
- n. Production of a technical investigation report.