

# INTERNATIONAL AMMUNITION TECHNICAL GUIDELINES

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## **Ammunition management personnel competences**

### **Warning**

The International Ammunition Technical Guidelines (IATG) are subject to regular review and revision. This document is current with effect from the date shown on the cover page. To verify its status, users should consult [www.un.org/disarmament/ammunition](http://www.un.org/disarmament/ammunition)

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## Foreword

Ageing, unstable and excess conventional ammunition stockpiles pose the dual risks of **accidental explosions at munition sites** and **diversion to illicit markets**.

The humanitarian impact of ammunition-storage-area explosions, particularly in populated areas, has resulted in death, injury, environmental damage, displacement and disruption of livelihoods in over 100 countries. Accidental ammunition warehouse detonations count among the heaviest explosions ever recorded.

Diversion from ammunition stockpiles has fuelled armed conflict, terrorism, organized crime and violence, and contributes to the manufacture of improvised explosive devices. Much of the ammunition circulating among armed non-State actors has been illicitly diverted from government forces.<sup>1</sup> In recognition of these dual threats of explosion and diversion, the General Assembly requested the United Nations to develop **guidelines for adequate ammunition management**.<sup>2</sup> Finalized in 2011, the International Ammunition Technical Guidelines (IATG) provide voluntary, practical, modular guidance to support national authorities (and other stakeholders) in safely and securely managing conventional ammunition stockpiles. The UN SaferGuard Programme was simultaneously established as the corresponding knowledge-management platform to oversee and disseminate the IATG.

The IATG also ensure that the United Nations entities consistently deliver high-quality advice and support – from mine action to counter-terrorism, from child protection to disarmament, from crime reduction to development.

The IATG consist of 12 volumes that provide practical guidance for ‘through-life management’ approach to ammunition management. The IATG can be applied at the guidelines’ **basic, intermediate, or advanced levels**, making the IATG relevant for all situations by taking into account the diversity in capacities and resources available. Interested States and other stakeholders can **utilize the IATG for the development of national standards and standing operating procedures**.

The IATG are reviewed and updated at a minimum every five years, to reflect evolving ammunition stockpile-management norms and practices, and to incorporate changes due to changing international regulations and requirements. The review is undertaken by the UN SaferGuard Technical Review Board composed of national technical experts with the support of a corresponding Strategic Coordination Group comprised of expert organizations applying the IATG in practice.

The latest version of each IATG module can be found at [www.un.org/disarmament/ammunition](http://www.un.org/disarmament/ammunition).

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<sup>1</sup> S/2008/258.

<sup>2</sup> See also the urgent need to address poorly-maintained stockpiles as formulated by the United Nations Secretary-General in his Agenda for Disarmament, *Securing Our Common Future* (2018).

## Introduction

The nature of ammunition and explosives, with their potential for unplanned, violent reaction, makes it necessary to develop recommendations and guidelines for safe conventional ammunition management. The effective implementation of IATG requires well-trained and educated individuals with specialist knowledge.

There are no international standards which lay down exactly what competences are required for the various roles within an ammunition management system. There was a project within the European Union, EUExcert,<sup>3</sup> (2003 – 2013) which aimed to establish a stable fundament and framework for vocational education of people in the European explosives sector. In parallel, the UK was also examining the development of competency standards for use in the explosives sector. The UK work has resulted in a set of National Occupational Standards for Explosive Substances and Articles.<sup>4</sup> These were adopted by EUExcert as '*best practice*' and are now being rolled out across the European explosives industry under the EUExImp<sup>5 6</sup> project, which is part of the wider EU ERASMUS programme for education, training, youth and sport. It therefore makes sense that the IATG personnel competences are based on this '*best practice*' work.

There are regional competency standards for explosive ordnance disposal (EOD) available, Test and Evaluation Protocol 09.30/01/2014 Version 1.0 dated 30 October 2014 Explosive Ordnance Disposal (EOD) Competency Standards, which should be used for many of the activities covered by IATG 10.10:2020[E] *Demilitarization and destruction* and IATG 11.30:2020[E] *ASA Explosions – EOD clearance*

This IATG module therefore provides a series of competences for the various generic roles of individuals engaged in conventional ammunition stockpile management.

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<sup>3</sup> *Certifying Expertise in the Explosives Sector*. EUExcert. [www.euexcert.org](http://www.euexcert.org).

<sup>4</sup> Listed at <http://www.cogent-ssc.com/CM/ExplosivesNOS.pdf>.

<sup>5</sup> European explosives sector implementation of occupational standards.

<sup>6</sup> Current participating States are Estonia, Germany, Portugal, Sweden and UK.

## Ammunition management personnel competences (LEVEL 2 and 3)

### 1 Scope

This IATG module introduces the concept of competences, competency and occupational standards to be used for the training and assessment of personnel, at all levels, to safely work with ammunition and explosives, or within explosive facilities.

### 2 Normative references

A list of normative references is given in Annex A. These documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

A further list of informative references is given in Annex B in the form of a bibliography, which lists documents that contain additional information related to the contents of this IATG module.

### 3 Terms and definitions

For the purposes of this module the following terms and definitions, as well as the more comprehensive list given in IATG 01.40:2020 *Glossary of terms, definitions and abbreviations*, shall apply.

The term 'competence' refers to *the ability of an individual to do the job properly*.

The term 'competency' refers to *the related knowledge, skills, abilities, attributes and behavioural traits of an individual*.

The term 'standard' refers to *a documented agreement containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics to ensure that materials, products, processes and services are fit for their purpose*.

In all modules of the International Ammunition Technical Guidelines, the words 'shall', 'should', 'may' and 'can' are used to express provisions in accordance with their usage in ISO standards.

- a) **'shall' indicates a requirement:** It is used to indicate requirements strictly to be followed in order to conform to the document and from which no deviation is permitted.
- b) **'should' indicates a recommendation:** It is used to indicate that among several possibilities one is recommended as particularly suitable, without mentioning or excluding others, or that a certain course of action is preferred but not necessarily required, or that (in the negative form, 'should not') a certain possibility or course of action is deprecated but not prohibited.
- c) **'may' indicates permission:** It is used to indicate a course of action permissible within the limits of the document.
- d) **'can' indicates possibility and capability:** It is used for statements of possibility and capability, whether material, physical or casual.

## 4 Background <sup>7</sup>

There are no international standards, and very few national standards,<sup>8</sup> that lay down exactly what competences are required for the various roles within an ammunition management system. Although many nations have formal military technical training for conventional ammunition stockpile management (See Clause 7.2), the development of which will have utilized a Training Needs Analysis to determine the syllabus, this does not necessarily involve the use of competency and is more qualification based.

There was a project within the European Union, EUExcert,<sup>9</sup> (2003 – 2013) which aimed to establish a stable fundament and framework for vocational education of people in the European explosives sector. In parallel, the UK was also examining the development of competency standards for use in the explosives sector. The UK work has resulted in a set of National Occupational Standards for Explosive Substances and Articles.<sup>10</sup> These were adopted by EUExcert as '*best practice*' and are now being rolled out within the European explosives industry under the EUExImp<sup>11 12</sup> project, which is part of the wider EU ERASMUS programme for education, training, youth and sport. The NOS ESA have also been developed, and comply, with the principles of the European Credit System for Vocational Education and Training (ECVET).<sup>13</sup> It therefore makes sense that the IATG personnel competences are based on this '*best practice*' as there is not yet any other body of work available.

There are regional competency standards for explosive ordnance disposal (EOD) available, Test and Evaluation Protocol 09.30/01/2014 Version 1.0 dated 30 October 2014 Explosive Ordnance Disposal (EOD) Competency Standards, which should be used for many of the activities covered by IATG 10.10:2020[E] *Demilitarization and destruction* and IATG 11.20:2020[E] *ASA Explosions – EOD clearance*.

Training alone does not necessarily guarantee an individual's ability to successfully and safely perform a task within an explosive environment. The outcome of the training is more important than the inputs, with an individuals' ability to do a task being more important than how long they have trained to do the task. Similarly, the length of time someone has been doing a particular task does not necessarily mean that they are doing that task in the safest and most efficient manner. Thus the ability of an individual to perform a task is determined by a combination of their knowledge, skills, experience and attitude.

The recognition of this aspect of performance ability in the early 1980s has led to the development of vocational qualifications and assessments being used in parallel to the attainment of theoretical knowledge demonstrated by more formal or academic qualifications.

The generic area of competence and competency is constantly evolving and to date there are no internationally agreed definitions for each of the terms. There is, however, a degree of consensus as to the terms at Clause 3, hence their use within this IATG.

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<sup>7</sup> An excellent overview of competences in the explosives sector is provided in *Introduction to Explosive Substances and Articles National Occupational Standards*. Denise Clarke. HSQ Ltd in SAFEX Newsletter 44, 1<sup>st</sup> Quarter, 2013. Much of the content of this clause is developed from this reference and due attribution is made. More useful information on explosives sector competences may be found on the HSQ website [www.homelandsecurityqualifications.co.uk](http://www.homelandsecurityqualifications.co.uk).

<sup>8</sup> Outside the EUExcert nations who have adopted the UK NOS ESA the only other nation that has a formal qualification based on competency is the South African Qualification Agency that has a national qualification for an Ammunition Fitter, (similar to that of Ammunition Technician Class 1). [pcqs.saqqa.org.za/viewQualification.php?id=90652](http://pcqs.saqqa.org.za/viewQualification.php?id=90652).

<sup>9</sup> *Certifying Expertise in the Explosives Sector*. EUExcert. [www.euexcert.org](http://www.euexcert.org).

<sup>10</sup> Listed at <http://www.cogent-ssc.com/CM/ExplosivesNOS.pdf>.

<sup>11</sup> European explosives sector implementation of occupational standards.

<sup>12</sup> Current participating States are Estonia, Germany, Portugal, Sweden and UK.

<sup>13</sup> [www.ecctis.co.uk/ecvet/Default.aspx](http://www.ecctis.co.uk/ecvet/Default.aspx). EC Recommendation 2009/C155/02 dated 18 June 2009. [eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:155:0011:0018:EN:PDF](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:C:2009:155:0011:0018:EN:PDF)

## 4.1 Competence model

To achieve competence at a task requires an individual to perform in three areas; 1) behavioural competences; 2) technical competences; and 3) the achievement of targets and objectives. This is represented in the competence model at Figure 1:

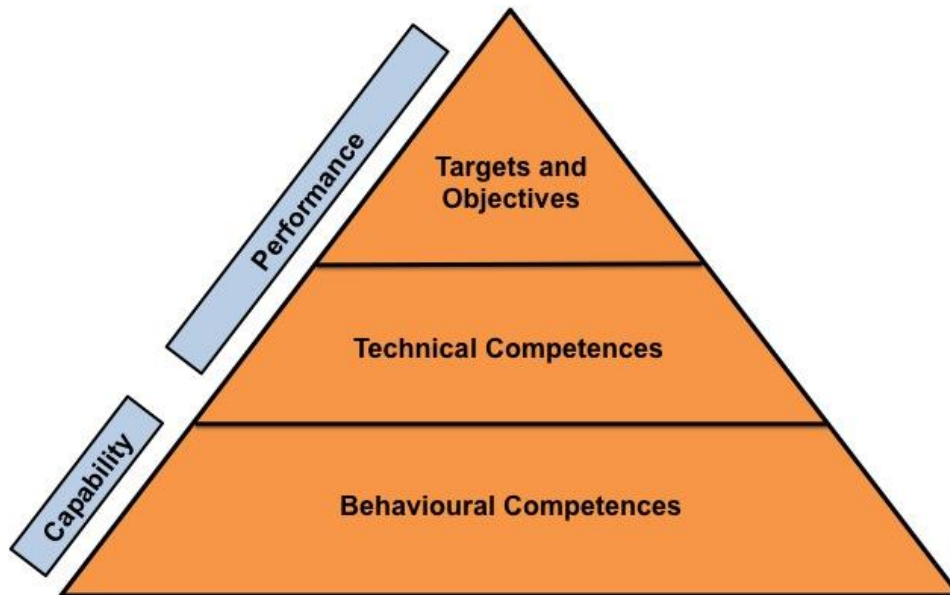


Figure 1: Competence Model

## 4.2 Behavioural competencies

These are the personal qualities that an organization requires of the individuals they employ, for example: 1) trustworthy; 2) honest; 3) self-motivator; 4) verbal communication skills; etc. Cultural and organizational environments will have an influence on the qualities an organization may require and this falls beyond the scope of this IATG.

## 4.3 Technical competences

These are the competences that individuals require to meet organizations' standards of good practice. They describe what individuals must do to perform safely and effectively. They are often also referred to as functional competences or competency standards, and represent the performance required of an individual to achieve the quality standard for a particular task. These are the competences covered in this IATG.

## 4.4 Targets and objectives

These represent the output of an individuals' performance. For example, an ammunition worker may be required to inspect 55 rounds of artillery ammunition per day as part of a long-term surveillance task. As these are set by the organization, and should be agreed with the individual, they fall outside the scope of this IATG.

# 5 Aim

The aim of the technical competences for personnel engaged in conventional ammunition stockpile management processes shall be to:

- a) provide agreed competences that may be used by organizations engaged in the stockpile management of conventional ammunition;

- b) assist in developing a commonality of approach across the international community;
- c) provide objective criteria to assist organizations in the recruitment of appropriately qualified and experienced personnel;
- d) provide a benchmark for the development of conventional ammunition stockpile management training;
- e) contribute towards a reduction of accidents during conventional ammunition stockpile management processes; and
- f) contribute towards the maintenance and enhancement of safety during conventional ammunition stockpile management.

## 6 Categories of ammunition personnel

There are a large number of roles and job titles used within the explosives sector, many dependent on the historical development of the explosives industry or military organizations within a nation. It is neither possible nor feasible to list them all and develop a competency for each as this shall be a national responsibility. For the purposes of this IATG the following generic categories of personnel have been determined as being commonly used within the international community during the stockpile management of ammunition and explosives. The related competence requirement at Annex C to H should therefore be used as guidance should nations wish to develop a job competency for specific roles and job titles:

LEVEL	Category	Role
1	<b>Ammunition Handler</b>	Assist in the handling and movement of ammunition and explosive substances and articles during issue, receipt, storage and distribution.
2A	<b>Ammunition Processor</b>	Inspect, maintain and repair ammunition or other explosive substances and articles.
2B	<b>Ammunition Accountant</b>	Accurately account for ammunition and explosive substances and articles.
3	<b>Ammunition Supervisor</b>	Supervise the issue, receipt, storage, distribution and maintenance and disposal of ammunition and explosive substances and articles.
4	<b>Ammunition Manager</b>	Manage the storage, issue, receipt, distribution, maintenance and stockpile management of ammunition and explosive substances and articles.
5	<b>Ammunition Inspector</b>	Develop, implement and audit the policy and technical instructions for all aspects of the stockpile management of ammunition and explosive substances and articles.
6	<b>Ammunition Regulator</b>	Develop national policy and technical instructions for all aspects of the stockpile management of ammunition and explosive substances and articles. <sup>14</sup>

Table 1: Categories of ammunition personnel

NOTE 1 It should be noted that the competences listed do not necessarily correspond to the actual tasks carried out by each generic personnel category on a routine basis. For example, an Ammunition Manager is very unlikely to have the need to routinely issue or receive ammunition, yet the individual must have demonstrated previous competence in that area to be able to manage or supervise effectively, or develop policy relating to safety for that particular task.

<sup>14</sup> An Ammunition Regulator should be a highly experienced and capable Ammunition Inspector. Thus, the personnel competences will be the same.

National authorities may choose to develop sub-categories with a more limited range of competences. For example, if an ammunition depot manager has no need to be competent at managing ammunition processing, as there is no processing facility at the depot the individual manages, then a sub-category of Ammunition Manager (Storage) could be developed with a more limited range of competencies. Similarly, you may choose to implement a sub-category of Ammunition Supervisor (Processing) with a more limited range of competences.

## **7 Assessment**

### **7.1 General**

Assessment of someone's competence may still require the determination of an individual's theoretical knowledge by examination, but this is not a valid stand-alone test to determine their ability to translate this knowledge into effective and efficient activity in the workplace. Other evidence should be required to enable an individual's competence to be measured and assessed. This evidence may include:

- a) observation of an individual performing a task;
- b) witness testimony from colleagues and managers;
- c) examples of documentation produced by the individual;
- d) examples of technical calculations performed by an individual; and/or
- e) verbal examination of an individual's knowledge of the task.

Stockpile management organizations shall be responsible for developing appropriate competence based systems<sup>15</sup> for the assessment of an individual's competence during recruitment and then on a regular basis during their employment. Suitably qualified and accredited assessors, who are occupationally competent themselves in ammunition management, shall be used to assess an individual's competence. As security institutions strive to increase diversity in their recruitment and promotion practices, they should analyse assessors and the assessment process itself to avoid the inclusion of criteria that, while irrelevant to the individual's performance, may introduce intentional or unintentional biases favouring male candidates.

### **7.2 Retrospective qualifications**

There are a range of qualifications currently extant that have required individuals to previously demonstrate competence in conventional ammunition stockpile management.

Annex M lists those qualifications that have initially been deemed to require individuals to have formally demonstrated their competence during their initial qualification and training. This is not exhaustive and qualifications may be retrospectively added to this list at any time after mapping to the relevant NOS for ESA and clearance by the IATG Technical Review Board (TRB)/Strategic Co-ordination Group (SCG).<sup>16</sup> States and conventional ammunition stockpile management organizations are actively encouraged to contribute to this list in order to identify a wider pool of available expertise in this area.

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<sup>15</sup> Further guidance on this issue may be found in *Assessing people against the Explosive Substances and Articles National Occupational Standards*. Denise Clarke, HSQ Ltd, in SAFEX Newsletter 50, 3<sup>rd</sup> Quarter, 2014.  
[www.homelandsecurityqualifications.co.uk/wp-content/uploads/2014/10/NL50.pdf](http://www.homelandsecurityqualifications.co.uk/wp-content/uploads/2014/10/NL50.pdf)

<sup>16</sup> Recommendations for inclusion in this list should be forwarded to the IATG Project Manager using the contact details in the copyright notice.

NOTE 2 Organisations should be aware that just because an individual has qualified on one of the qualification courses listed at Annex M it does not necessarily mean that the individual's competency is current. The qualification should be backed up by proof of regular employment, and successful performance, in a conventional ammunition stockpile management related area since their initial attendance on the qualification course.

### **7.3 Other competences**

IATG 12.10:2020[E] Multinational Operations includes the competences required of the Force Explosives Safety Officer. These are included at Annex L for information.

## **Annex A**

### **(normative)**

### **References**

The following normative documents contain provisions, which, through reference in this text, constitute provisions of this part of the guide. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of the guide are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of ISO maintain registers of currently valid ISO or EN:

- a) Test and Evaluation Protocol 09.30/01/2014 Version 1.0 dated 30 October 2014 Explosive Ordnance Disposal (EOD) Competency Standards<sup>b)</sup> IATG 01.40:2020[E] *Glossary of terms, definitions and abbreviations*. UNODA. 2015; and
- c) *United Nations Recommendations on the Transport of Dangerous Goods Model Regulations*, (Eighteenth revised edition), ST/SG/AC.10/1/Rev.18, (ISBN 978-92-1-139146Ed-6), New York and Geneva, United Nations, 2013. (*Referred to as the UN Model Regulations*).

The latest version/edition of these references should be used. The UN Office for Disarmament Affairs (UNODA) holds copies of all references<sup>17</sup> used in this guide. A register of the latest version/edition of the International Ammunition Technical Guidelines is maintained by UNODA, and can be read on the IATG website: [www.un.org/disarmament/un-safeguard/](http://www.un.org/disarmament/un-safeguard/).

National authorities, employers and other interested bodies and organisations should obtain copies before commencing conventional ammunition stockpile management programmes.

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<sup>17</sup> Where copyright permits.

## **Annex B**

### **(informative)**

## **References**

The following informative documents contain provisions, which should also be consulted to provide further background information to the contents of this guide:

- a) *Assessing people against the Explosive Substances and Articles National Occupational Standards*. Denise Clarke, HSQ Ltd, in SAFEX Newsletter 50, 3<sup>rd</sup> Quarter, 2014;
- b) *ESA NOS KR1 Research, Design and Development (Key Role 1)*. UK Standards Setting Body (SSB) for Explosives, Munitions and Search Occupations. February 2006;
- c) *Introduction to Explosive Substances and Articles National Occupational Standards*. Denise Clarke, HSQ Ltd, in SAFEX Newsletter 44, 1<sup>st</sup> Quarter, 2013;
- d) *National Occupational Standards for Explosives*. UK Commission for Employment and Skills (UK CES)<sup>18</sup>; and
- e) *Use of Explosive Substances and Articles National Occupational Standards*. HSQ UK. 15 July 2010.

The latest version/edition of these references should be used. The UN Office for Disarmament Affairs (UN ODA) holds copies of all references<sup>19</sup> used in this guide. A register of the latest version/edition of the International Ammunition Technical Guidelines is maintained by UN ODA, and can be read on the IATG website: [www.un.org/disarmament/un-saferguard/](http://www.un.org/disarmament/un-saferguard/).

National authorities, employers and other interested bodies and organisations should obtain copies before commencing conventional ammunition stockpile management programmes.

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<sup>18</sup> Enter the search term 'Explosives' in this website <http://www.ukstandards.org.uk/> to obtain all relevant NOS on the explosives sector. The full list is at Annex K.

<sup>19</sup> Where copyright permits.

## Annex C (normative) Competences – Ammunition Handler

Competence: Ammunition Handler			
Employment Category:		Ammunition Handler	
Role:		Assist in the handling and movement of ammunition, in an explosive storage area during issue, receipt, storage and distribution processes.	
Responsibilities:			
Assist in the packing and unpacking of ammunition <sup>20</sup> to and from transit frames, containers or packaging.			
Assist in the selection for issue of the correct ammunition from storage by batch/lot number.			
Assist in the receipt of the correct explosive substance or article into storage by batch/lot number.			
Assist in the correct loading and unloading of ammunition to and from transit frames, containers or packaging.			
Ensure cleanliness and good housekeeping in the explosive storage area.			
Authorities:			
Ensure compliance with the safe system of work contained within the IATG series.			
Ensure compliance with IATG for the safe handling and storage of ammunition.			
IATG Code <sup>21</sup>	Competencies	IATG <sup>22</sup>	NOS ESA Reference <sup>23</sup>
Storage			
7.1	Move Ammunition Manually	03.20 06.30	COGESA7.1
7.3	Receive and Place Ammunition into Storage	03.20 06.30	COGESA7.3
7.7	Select and Prepare Ammunition for Despatch	03.20 06.30	COGESA7.7
7.8	Despatch Ammunition	03.20 06.30	COGESA7.8
7.15	Carry Out Stock Checks of Ammunition	03.10 03.20	COGESA7.15
7.17	Operate Specialized Plant and Machinery to Performance Requirements for Ammunition	05.50	COGESA7.17
7.18	Lift, Transfer and Position Ammunition Loads	06.30	COGESA7.18
Transport			
8.4	Load the Vehicle with Ammunition <sup>24</sup>	08.10	COGESA8.4

<sup>20</sup> In competences the term ammunition includes all explosive substances and article.

<sup>21</sup> The IATG competence code equates to the numbers of the NOS ESA Reference for ease of future amendment.

<sup>22</sup> The task primarily falls within the requirements of the IATG listed.

<sup>23</sup> Details of the Performance Criteria and Knowledge Requirements for each competence can be obtained from the documents held by UNODA and also reproduced on the IATG SaferGuard website. One example is included in IATG in order that users may understand the system and is at Annex J.

<sup>24</sup> The Driver of the vehicle, and the management of his organization, is responsible for ensuring that the vehicle is of an appropriate type to carry explosives and has all the relevant safety equipment and hazard signs. See *United Nations*

<b>Competence: Ammunition Handler</b>			
8.6	Unload Ammunition from the Vehicle	08.10	COGESA8.6
GV1	Prepare the Vehicle for Driving	N/A	SFLDGV1
GV2	Protect the Vehicle and the Load	N/A	SFLDGV2
GV3	Operate and Monitor the Vehicle Systems	N/A	SFLDGV3
GV4	Manoeuvre the Vehicle in Restricted Spaces	N/A	SFLDGV4
8.15	Escort the Ammunition Load	08.10	COGESA8.15
<b>Generic Applications</b>			
13.1	Work Effectively in a Team Involved in Activities for Ammunition	N/A	COGESA13.1
LA1	Manage your own Resources	N/A	CFAMLA1
LA2	Manage your own Resources and Professional Development	N/A	CFAMLA2
SA13.12	Pack or Re-Pack Ammunition	07.30	COGESA13.12
SA13.13	Unpack Ammunition	07.30	COGESA13.13
LB6	Provide Leadership in your Area of Responsibility	N/A	CFAMLB6
SA13.15	Prepare and Care for Equipment in an Explosives Environment	05.50	COGESA13.15

## Annex D (normative) Competences – Ammunition Processor

Competence: Ammunition Processor <sup>25</sup>			
Employment Category:		Ammunition Processor	
Role:		Participate in the inspection, repair and surveillance of ammunition processes within an explosives storage area.	
Responsibilities:			
Packing and unpack ammunition <sup>26</sup> from its primary packaging.			
Identify the correct ammunition for processing by batch/lot number.			
Undertake ammunition processing tasks for the inspection, repair and surveillance of ammunition on which they have being trained.			
Assist in the correct loading and unloading of ammunition to and from transit frames, containers or packaging.			
Ensure cleanliness and good housekeeping in the ammunition process area.			
Authorities:			
Ensure compliance with the safe system of work contained within the IATG series.			
Ensure compliance with IATG for the safe handling and storage of ammunition.			
Ensure compliance with IATG for the safe processing of ammunition.			
IATG Code <sup>27</sup>	Competencies	IATG <sup>28</sup>	NOS ESA Reference <sup>29</sup>
Maintenance (Inspection, Repair, Surveillance and Proof)			
5.4	Implement the Inspection of Ammunition	07.20 07.30	COGESA5.4
5.5	Implement the Adjustment of Ammunition	07.20 07.30	COGESA5.5
5.6	Implement the Complex Removal of Ammunition	07.20 07.30	COGESA5.6
5.7	Implement the Routine Removal of Ammunition	07.20 07.30	COGESA5.7
5.8	Implement the Complex Assembly of Ammunition	07.20 07.30	COGESA5.8
5.9	Implement the Routine Assembly of Ammunition	07.20 07.30	COGESA5.9
5.11	Implement the Complex Repair of Ammunition	07.20 07.30	COGESA5.11

<sup>25</sup> See Note 1 to Clause 6 on competence versus role.

<sup>26</sup> In competences the term ammunition includes all explosive substances and article.

<sup>27</sup> The IATG competence code equates to the numbers of the NOS ESA Reference for ease of future amendment.

<sup>28</sup> The task primarily falls within the requirements of the IATG listed.

<sup>29</sup> Details of the Performance Criteria and Knowledge Requirements for each competence can be obtained from the documents held by UN ODA and also reproduced on the IATG SaferGuard website. One example is included in IATG in order that users may understand the system and is at Annex J.

<b>Competence: Ammunition Processor <sup>25</sup></b>			
5.12	Implement the Routine Repair of Ammunition	07.20 07.30	COGESA5.12
5.15	Implement Configuration Activities for Ammunition	07.20 07.30	COGESA5.15
<b>Storage</b>			
7.1	Move Ammunition Manually	03.20 06.30	COGESA7.1
7.3	Receive and Place Ammunition into Storage	03.20 06.30	COGESA7.3
7.15	Carry Out Stock Checks of Ammunition	03.10 03.20	COGESA7.15
7.17	Operate Specialized Plant and Machinery to Performance Requirements for Ammunition	05.50	COGESA7.17
7.18	Lift, Transfer and Position Ammunition Loads	06.30	COGESA7.18
<b>Transport</b>			
8.2	Obtain Information on the Ammunition Load	01.50	COGESA8.2
8.4	Load the Vehicle with Ammunition <sup>30</sup>	08.10	COGESA8.4
8.6	Unload Ammunition from the Vehicle	08.10	COGESA8.6
GV1	Prepare the Vehicle for Driving <sup>31</sup>	N/A	SFLDGV1
GV2	Protect the Vehicle and the Load	N/A	SFLDGV2
GV3	Operate and Monitor the Vehicle Systems	N/A	SFLDGV3
GV4	Manoeuvre the Vehicle in Restricted Spaces	N/A	SFLDGV4
8.15	Escort Ammunition Load	08.10	COGESA8.15
<b>Generic Applications</b>			
13.1	Work Effectively in a Team Involved in Activities for Ammunition	N/A	COGESA13.1
LA1	Manage your own Resources	N/A	CFAMLA1
LA2	Manage your own Resources and Professional Development	N/A	CFAMLA2
LB6	Provide Leadership in your Area of Responsibility	N/A	CFAMLB6
SA13.12	Pack or Re-Pack Ammunition	07.30	COGESA13.12
SA13.13	Unpack Ammunition	07.30	COGESA13.13
SA13.15	Prepare and Care for Equipment in an Explosives Environment	05.50	COGESA13.15

<sup>30</sup> The Driver of the vehicle, and the management of his organization, is responsible for ensuring that the vehicle is of an appropriate type to carry explosives and has all the relevant safety equipment and hazard signs. See *United Nations Recommendations on the Transport of Dangerous Goods Model Regulations*, (Eighteenth revised edition), ST/SG/AC.10/1/Rev.18, (ISBN 978-92-1-139146Ed-6), New York and Geneva, United Nations, 2013. (Referred to as the *UN Model Regulations*).

<sup>31</sup> GV1 to GV4 for only within the Explosives Storage Area.

## Annex E (normative) Competences – Ammunition Accountant

Competence: Ammunition Accountant			
Employment Category:		Ammunition Accountant	
Role:		To accurately account for ammunition during its service life.	
Responsibilities:			
Identify the correct ammunition for issue, receipt, storage or processing by batch/lot/BKI number.			
Accurately account for ammunition for issue, receipt, storage or processing by batch/lot/BKI number.			
Accurately complete all documentation relating to the issue, receipt, storage or processing of ammunition by batch/lot/BKI number.			
Authorities:			
Ensure compliance with the safe system of work contained within the IATG series.			
Ensure compliance with IATG for the safe handling and storage of ammunition.			
Ensure compliance with IATG for the safe processing of ammunition.			
IATG Code <sup>32</sup>	Competencies	IATG <sup>33</sup>	NOS ESA Reference <sup>34</sup>
Maintenance (Inspection, Repair, Surveillance and Proof)			
5.17	Accurately account for the processing of ammunition by batch/lot/BKI number.	03.10	N/A
Storage			
7.13	Manage Stock Levels and Stock Inventories of Ammunition	03.10	COGESA7.13
7.14	Audit Stock Levels and Stock Inventories for Ammunition	03.10 03.20	COGESA7.14
7.15	Carry Out Stock Checks of Ammunition	03.10 03.20	COGESA7.15
7.16	Maintain Stock Control Systems for Ammunition	03.10 03.20	COGESA7.16
7.19	Accurately account for the issue, receipt or storage of ammunition by batch/lot/BKI number.	03.10	N/A
Generic Applications			
13.1	Work Effectively in a Team Involved in Activities for Ammunition	N/A	COGESA13.1
LA1	Manage your own Resources	N/A	CFAMLA1
LA2	Manage your own Resources and Professional Development	N/A	CFAMLA2
LD5	Allocate and Check Work in your Team	N/A	CFAMLD5
LB5	Provide Leadership for your Team	N/A	CFAMLB5

<sup>32</sup> The IATG competence code equates to the numbers of the NOS ESA Reference for ease of future amendment.

<sup>33</sup> The task primarily falls within the requirements of the IATG listed.

<sup>34</sup> Details of the Performance Criteria and Knowledge Requirements for each competence can be obtained from the documents held by UN ODA and also reproduced on the IATG SaferGuard website. One example is included in IATG in order that users may understand the system and is at Annex J.

Competence: Ammunition Accountant			
LB6	Provide Leadership in your Area of Responsibility	N/A	CFAMLB6

## Annex F (normative) Competences – Ammunition Supervisor

Competence: Ammunition Supervisor <sup>35</sup>			
Employment Category:		Ammunition Supervisor	
Role:		The supervision of all issue, receipt, storage, inspection, surveillance, repair and distribution processes for ammunition within an explosivesstorage area.	
Responsibilities:			
Oversee those conducting issue, receipt, storage, distribution and maintenance of ammunition and other explosive substances and articles			
Supervise the selection for issue of the correct ammunition from storage by batch/lot number.			
Supervise the receipt of the correct explosive substance or article into storage by batch/lot number.			
Ensure the correct ammunition is processed by batch/lot number.			
Supervise ammunition processing tasks for the inspection, repair and surveillance of ammunition.			
Supervise the correct loading and unloading of ammunition to and from transit frames, containers or packaging.			
Ensure cleanliness and good housekeeping in the explosive storage area.			
Authorities:			
Ensure compliance with the safe system of work contained within the IATG series.			
Ensure compliance with IATG for the safe handling and storage of ammunition.			
Ensure compliance with IATG for the safe processing of ammunition.			
IATG Code <sup>36</sup>	Competencies	IATG <sup>37</sup>	NOS ESA Reference <sup>38</sup>
Safety Management			
2.7	Implement the Organisational Safety Policy and/or Strategy for Explosives	01.30	COGESA2.7
3.2.9A	Implement Risk Control Measures for Ammunition Safety	06.10	COGESA3.2.9A
Maintenance (Inspection, Repair, Surveillance and Proof)			
5.3	Manage the Maintenance Plan for Ammunition	01.30 07.20	COGESA5.3
5.4	Implement the Inspection of Ammunition	07.20 07.30	COGESA5.4
5.5	Implement the Adjustment of Ammunition	07.20 07.30	COGESA5.5
5.6	Implement the Complex Removal of Ammunition	07.20 07.30	COGESA5.6

<sup>35</sup> See Note 1 to Clause 6 on competence versus role.

<sup>36</sup> The IATG competence code equates to the numbers of the NOS ESA Reference for ease of future amendment.

<sup>37</sup> The task primarily falls within the requirements of the IATG listed.

<sup>38</sup> Details of the Performance Criteria and Knowledge Requirements for each competence can be obtained from the documents held by UN ODA and also reproduced on the IATG SaferGuard website. One example is included in IATG in order that users may understand the system and is at Annex J.

<b>Competence: Ammunition Supervisor <sup>35</sup></b>			
5.7	Implement the Routine Removal of Ammunition	07.20 07.30	COGESA5.7
5.8	Implement the Complex Assembly of Ammunition	07.20 07.30	COGESA5.8
5.9	Implement the Routine Assembly of Ammunition	07.20 07.30	COGESA5.9
5.10	Assess the Feasibility of an Explosive Substance or Article Repair	01.50	COGESA5.10
5.11	Implement the Complex Repair of Ammunition	07.20 07.30	COGESA5.11
5.12	Implement the Routine Repair of Ammunition	07.20 07.30	COGESA5.12
5.14	Manage Configuration Activities for Ammunition	07.20 07.30	COGESA5.14
5.15	Implement Configuration Activities for Ammunition	07.20 07.30	COGESA5.15
5.16	Audit the Effectiveness of Configuration Activities for Ammunition	06.70	COGESA5.16
5.17	Accurately account for the processing of ammunition by batch/lot/BKI number.	03.10	N/A
<b>Storage</b>			
7.1	Move Ammunition Manually	03.20 06.30	COGESA7.1
7.2	Supervise the Placing of Ammunition into Storage	03.20 06.30	COGESA7.2
7.3	Receive and Place Ammunition into Storage	03.20 06.30	COGESA7.3
7.4	Supervise the Receiving of Ammunition into Storage	03.20 06.30	COGESA7.4
7.5	Supervise the Maintenance of Storage Conditions for Ammunition	06 Series	COGESA7.5
7.6	Maintain the Quality of Ammunition in Storage	06 Series	COGESA7.6
7.7	Select and Prepare Ammunition for Despatch	03.20 06.30	COGESA7.7
7.8	Despatch Ammunition	03.20 06.30	COGESA7.8
7.9	Supervise the Selection, Preparation and Despatch of Ammunition	03.20 06.30	COGESA7.9
7.10	Manage the Receipt of Ammunition	03.20 06.30	COGESA7.10
7.11	Manage the Storage of Ammunition	06 Series	COGESA7.11
7.12	Manage the Despatch of Ammunition	03.20 06.30	COGESA7.12
7.13	Manage Stock Levels and Stock Inventories of Ammunition	03.10	COGESA7.13
7.14	Audit Stock Levels and Stock Inventories for Ammunition	03.10 03.20	COGESA7.14

<b>Competence: Ammunition Supervisor <sup>35</sup></b>			
7.15	Carry Out Stock Checks of Ammunition	03.10 03.20	COGESA7.15
7.16	Maintain Stock Control Systems for Ammunition	03.10 03.20	COGESA7.16
7.17	Operate Specialized Plant and Machinery to Performance Requirements for Ammunition	05.50	COGESA7.17
7.18	Lift, Transfer and Position Ammunition Loads	06.30	COGESA7.18
7.19	Accurately account for the issue, receipt or storage of ammunition by batch/lot/BKI number.	03.10	N/A
<b>Transport</b>			
8.2	Obtain Information on the Ammunition Load	01.50	COGESA8.2
8.3A	Plan the Route and Timings for the Delivery and Collection of Ammunition by Road	08.10 09.10	COGESA8.3A
8.3B	Obtain Information on the Destination and Schedule of the Ammunition Load by Rail	08.10 09.10	COGESA8.3B
8.3C	Obtain Information on the Destination and Schedule of the Ammunition Load by Sea	08.10 09.10	COGESA8.3C
8.3D	Obtain Information on the Destination and Schedule of the Ammunition Load by Air	08.10 09.10	COGESA8.3D
8.4	Load the Vehicle with Ammunition <sup>39</sup>	08.10	COGESA8.4
8.5	Supervise the Loading of the Vehicle with Ammunition by Others	08.10	COGESA8.5
8.6	Unload Ammunition from the Vehicle	08.10	COGESA8.6
8.7	Supervise the Unloading of Ammunition from the Vehicle by Others	08.10	COGESA8.7
<b>Generic Applications</b>			
13.1	Work Effectively in a Team Involved in Activities for Ammunition	N/A	COGESA13.1
LA1	Manage your own Resources	N/A	CFAMLA1
LA2	Manage your own Resources and Professional Development	N/A	CFAMLA2
13.4	Manage Continuous Improvement in Activities for Explosive Substances and Articles	N/A	COGESA13.4
LD5	Allocate and Check Work in your Team	N/A	CFAMLD5
LB5	Provide Leadership for your Team	N/A	CFAMLB5
LB6	Provide Leadership in your Area of Responsibility	N/A	CFAMLB6
IO3.13	Conduct an Assessment of Risks in the Workplace in Processing Industries Operations	02.10	COGPIO3.13
SA13.14	Manage Equipment in an Explosives Environment	05.50	COGESA13.14
SA13.15	Prepare and Care for Equipment in an Explosives Environment	05.50	COGESA13.15

<sup>39</sup> The Driver of the vehicle, and the management of his organization, is responsible for ensuring that the vehicle is of an appropriate type to carry explosives and has all the relevant safety equipment and hazard signs. See *United Nations Recommendations on the Transport of Dangerous Goods Model Regulations*, (Eighteenth revised edition), ST/SG/AC.10/1/Rev.18, (ISBN 978-92-1-139146Ed-6), New York and Geneva, United Nations, 2013. (Referred to as the *UN Model Regulations*).

<b>Competence: Ammunition Supervisor <sup>35</sup></b>			
SA13.16	Manage Explosives Safely	All	COGESA13.16
SA13.17	Certify as Free from Explosives (FFE)	07.20	COGESA13.17
SA13.18	Supervise Explosives Safety	All	COGESA13.18

## Annex G (normative) Competences – Ammunition Manager

Competence: Ammunition Manager <sup>40</sup>			
Employment Category:		Ammunition Manager	
Role:		The safe and efficient management of all ammunition related processes within an explosives storage area.	
Responsibilities:			
Manage all storage processes for ammunition within an explosives storage area.			
Manage all ammunition processing tasks for the inspection, repair and surveillance of ammunition with an explosives storage area.			
Implement all explosive safety processes and requirements within an explosives storage area.			
Authorities:			
Ensure compliance with the safe system of work contained within the IATG series.			
Ensure compliance with IATG for the safe handling and storage of ammunition.			
Ensure compliance with IATG for the safe processing of ammunition.			
IATG Code <sup>41</sup>	Competencies	IATG <sup>42</sup>	NOS ESA Reference <sup>43</sup>
Safety Management			
2.2	Determine the Classification of Ammunition	01.50	COGESA2.2
2.4	Analyse the Acceptability of Safety Control Measures for Specific Ammunition	02.10	COGESA2.4
2.4A	Review Safety Control Measures for Specific Ammunition	02.10	COGESA3.2.4A
2.7	Implement the Organisational Safety Policy and/or Strategy for Explosives	01.30	COGESA2.7
2.8	Analyse and Identify Aggregated Hazards and Risks for Explosives	02.10	COGESA2.8
3.2.8A	Assess the Suitability of Explosives Facilities	02.10 02.20	COGESA3.2.8A
2.9	Determine and Implement Aggregated Risk Control Measures for Explosives	02.10 06.10	COGESA2.9
3.2.9A	Implement Risk Control Measures for Ammunition Safety	06.10	COGESA3.2.9A
2.10	Develop and Implement Assurance Systems for Explosives Safety	02.10 06.10	COGESA2.10
2.11	Develop Emergency Response Systems and Procedures for Explosives Safety	02.10 11.10	COGESA2.11
3.2.12A	Contribute to the Investigation of Explosives Safety Incidents	11.10	COGESA3.2.12A

<sup>40</sup> See Note 1 to Clause 6 on competence versus role.

<sup>41</sup> The IATG competence code equates to the numbers of the NOS ESA Reference for ease of future amendment.

<sup>42</sup> The task primarily falls within the requirements of the IATG listed.

<sup>43</sup> Details of the Performance Criteria and Knowledge Requirements for each competence can be obtained from the documents held by UN ODA and also reproduced on the IATG SaferGuard website. One example is included in IATG in order that users may understand the system and is at Annex J.

<b>Competence: Ammunition Manager <sup>40</sup></b>			
2.14	Prepare and Submit an Explosives Licence Application	02.20 02.30	COGESA2.14
<b>Maintenance (Inspection, Repair, Surveillance and Proof)</b>			
5.3	Manage the Maintenance Plan for Ammunition	01.30 07.20	COGESA5.3
5.4	Implement the Inspection of Ammunition	07.20 07.30	COGESA5.4
5.5	Implement the Adjustment of Ammunition	07.20 07.30	COGESA5.5
5.6	Implement the Complex Removal of Ammunition	07.20 07.30	COGESA5.6
5.7	Implement the Routine Removal of Ammunition	07.20 07.30	COGESA5.7
5.8	Implement the Complex Assembly of Ammunition	07.20 07.30	COGESA5.8
5.9	Implement the Routine Assembly of Ammunition	07.20 07.30	COGESA5.9
5.10	Assess the Feasibility of an Explosive Substance or Article Repair	01.50	COGESA5.10
5.11	Implement the Complex Repair of Ammunition	07.20 07.30	COGESA5.11
5.12	Implement the Routine Repair of Ammunition	07.20 07.30	COGESA5.12
5.14	Manage Configuration Activities for Ammunition	07.20 07.30	COGESA5.14
5.15	Implement Configuration Activities for Ammunition	07.20 07.30	COGESA5.15
5.17	Accurately account for the processing of ammunition by batch/lot/BKI number.	03.10	N/A
<b>Storage</b>			
7.1	Move Ammunition Manually	03.20 06.30	COGESA7.1
7.2	Supervise the Placing of Ammunition into Storage	03.20 06.30	COGESA7.2
7.3	Receive and Place Ammunition into Storage	03.20 06.30	COGESA7.3
7.4	Supervise the Receiving of Ammunition into Storage	03.20 06.30	COGESA7.4
7.5	Supervise the Maintenance of Storage Conditions for Ammunition	06 Series	COGESA7.5
7.6	Maintain the Quality of Ammunition in Storage	06 Series	COGESA7.6
7.7	Select and Prepare Ammunition for Despatch	03.20 06.30	COGESA7.7
7.8	Despatch Ammunition	03.20 06.30	COGESA7.8
7.9	Supervise the Selection, Preparation and Despatch of Ammunition	03.20 06.30	COGESA7.9

<b>Competence: Ammunition Manager <sup>40</sup></b>			
7.10	Manage the Receipt of Ammunition	03.20 06.30	COGESA7.10
7.11	Manage the Storage of Ammunition	06 Series	COGESA7.11
7.12	Manage the Despatch of Ammunition	03.20 06.30	COGESA7.12
7.13	Manage Stock Levels and Stock Inventories of Ammunition	03.10	COGESA7.13
7.14	Audit Stock Levels and Stock Inventories for Ammunition	03.10 03.20	COGESA7.14
7.15	Carry Out Stock Checks of Ammunition	03.10 03.20	COGESA7.15
7.16	Maintain Stock Control Systems for Ammunition	03.10 03.20	COGESA7.16
7.17	Operate Specialized Plant and Machinery to Performance Requirements for Ammunition	05.50	COGESA7.17
7.18	Lift, Transfer and Position Ammunition Loads	06.30	COGESA7.18
7.19	Accurately account for the issue, receipt or storage of ammunition by batch/lot/BKI number.	03.10	N/A
<b>Transport</b>			
8.1A	Plan and Manage the Safe and Secure Transportation by Road of Explosive Substances and Articles	08.10 09.10	COGESA8.1A
8.1B	Plan and Manage the Safe and Secure Transportation by Rail of Explosive Substances and Articles	08.10 09.10	COGESA8.1B
8.1C	Plan and Manage the Safe and Secure Transportation by Sea of Explosive Substances and Articles	08.10 09.10	COGESA8.1C
8.1D	Plan and Manage the Safe and Secure Transportation by Air of Explosive Substances and Articles	08.10 09.10	COGESA8.1D
8.2	Obtain Information on the Ammunition Load	01.50	COGESA8.2
8.3A	Plan the Route and Timings for the Delivery and Collection of Ammunition by Road	08.10 09.10	COGESA8.3A
8.3B	Obtain Information on the Destination and Schedule of the Ammunition Load by Rail	08.10 09.10	COGESA8.3B
8.3C	Obtain Information on the Destination and Schedule of the Ammunition Load by Sea	08.10 09.10	COGESA8.3C
8.3D	Obtain Information on the Destination and Schedule of the Ammunition Load by Air	08.10 09.10	COGESA8.3D
8.4	Load the Vehicle with Ammunition <sup>44</sup>	08.10	COGESA8.4
8.5	Supervise the Loading of the Vehicle with Ammunition by Others	08.10	COGESA8.5
8.6	Unload Ammunition from the Vehicle	08.10	COGESA8.6
8.7	Supervise the Unloading of Ammunition from the Vehicle by Others	08.10	COGESA8.7

<sup>44</sup> The Driver of the vehicle, and the management of his organization, is responsible for ensuring that the vehicle is of an appropriate type to carry explosives and has all the relevant safety equipment and hazard signs. See *United Nations Recommendations on the Transport of Dangerous Goods Model Regulations*, (Eighteenth revised edition), ST/SG/AC.10/1/Rev.18, (ISBN 978-92-1-139146Ed-6), New York and Geneva, United Nations, 2013. (Referred to as the *UN Model Regulations*).

<b>Competence: Ammunition Manager <sup>40</sup></b>			
<b>Explosive Facilities Management</b>			
9.3	Conduct Safety Checks on Explosives Facilities	06.70	COGESA9.3
9.4	Develop and Implement the Explosives Facility Decommissioning Plan	10.10	COGESA9.4
9.5	Conduct Decommissioning Tasks on Explosives Facility	10.10	COGESA9.5
<b>Disposal</b>			
11.1	Assess the Ammunition for Disposal	07.30	COGESA11.1
11.2	Determine the Existence of a Suitable Disposal Procedure for Ammunition	Demil Task	COGESA11.2
11.3	Adapt an Existing Disposal Procedure for Ammunition	Demil Task	COGESA11.3
11.6	Plan the Disposal of Explosives Substances and/or Articles (Non-Complex)	10.10	COGESA11.6
11.7	Manage Tasks for the Disposal of Ammunition	Demil Task	COGESA11.7
11.8	Carry Out Pre-Disposal Tasks for Ammunition	Demil Task	COGESA11.8
11.9	Contribute to Pre-Disposal Tasks for Ammunition	Demil Task	COGESA11.9
11.10	Dispose of Ammunition by Complex Mechanical Breakdown Procedures	Demil Task	COGESA11.10
11.13	Dispose of Ammunition by Complex Burning Procedures	Demil Task	COGESA11.13
11.14	Dispose of Ammunition by Complex Incineration Procedures	Demil Task	COGESA11.14
11.15	Dispose of Ammunition by Complex Deflagration Procedures	Demil Task	COGESA11.15
11.16	Dispose of Ammunition by Complex Detonation Procedures	Demil Task	COGESA11.16
11.10A	Dispose of Ammunition by Non-Complex Mechanical Breakdown Procedures	Demil Task	COGESA11.10A
11.13A	Dispose of Ammunition by Non-Complex Burning Procedures	Demil Task	COGESA11.13A
11.14A	Dispose of Ammunition by Non-Complex Incineration Procedures	Demil Task	COGESA11.14A
11.15A	Dispose of Ammunition by Non-Complex Deflagration Procedures	Demil Task	COGESA11.15A
11.16A	Dispose of Ammunition by Non-Complex Detonation Procedures	Demil Task	COGESA11.16A
11.17	Dispose of Ammunition by Function as Intended Procedures	Demil Task	COGESA11.17
11.18	Contribute to the Ammunition Disposal Task	Demil Task	COGESA11.18
11.19	Carry Out Post-Disposal Tasks for Ammunition	Demil Task	COGESA11.19
11.20	Contribute to Post-Disposal Tasks for Ammunition	Demil Task	COGESA11.20
<b>Generic Applications</b>			

<b>Competence: Ammunition Manager <sup>40</sup></b>			
13.1	Work Effectively in a Team Involved in Activities for Ammunition	N/A	COGESA13.1
LA1	Manage your own Resources	N/A	CFAMLA1
LA2	Manage your own Resources and Professional Development	N/A	CFAMLA2
13.4	Manage Continuous Improvement in Activities for Explosive Substances and Articles	N/A	COGESA13.4
LD5	Allocate and Check Work in your Team	N/A	CFAMLD5
LB5	Provide Leadership for your Team	N/A	CFAMLB5
LB6	Provide Leadership in your Area of Responsibility	N/A	CFAMLB6
IO3.13	Conduct an Assessment of Risks in the Workplace in Processing Industries Operations	02.10	COGPIO3.13
SA13.9	Provide Technical or Safety Advice and/or Guidance to Others on Explosives	All	COGESA13.9
SA13.10	Make Presentations on Explosives Matters	N/A	COGESA13.10
SA13.11	Hand Over Ammunition	03.10 03.20	COGESA13.11
SA13.12	Pack or Re-Pack Ammunition	07.30	COGESA13.12
SA13.13	Unpack Ammunition	07.30	COGESA13.13
SA13.14	Manage Equipment in an Explosives Environment	05.50	COGESA13.14
SA13.15	Prepare and Care for Equipment in an Explosives Environment	05.50	COGESA13.15
SA13.16	Manage Explosives Safely	All	COGESA13.16
SA13.17	Certify as Free from Explosives (FFE)	07.20	COGESA13.17
SA13.18	Supervise Explosives Safety	All	COGESA13.18

## Annex H (normative) Competences – Ammunition Inspector

Competence: Ammunition Inspector <sup>45</sup>			
Employment Category:		Ammunition Inspector	
Role:		The safe and efficient management of all ammunition related processes within a national inventory.	
Responsibilities:			
Plan and manage all storage processes for ammunition within an explosives storage area.			
Plan and manage all ammunition processing tasks for the inspection, repair and surveillance of ammunition with an explosives storage area.			
Develop, plan and manage all explosive safety processes and requirements within an explosives storage area.			
Develop and supervise the implementation of all technical instructions, standing operating procedures and ammunition related documentation for the national ammunition inventory.			
Undertake ammunition accident investigations.			
Plan, manage and implement the safe disposal of ammunition.			
Authorities:			
Ensure compliance with the safe system of work contained within the IATG series.			
Ensure compliance with IATG for the safe handling and storage of ammunition.			
Ensure compliance with IATG for the safe processing of ammunition.			
IATG Code <sup>46</sup>	Competencies	IATG <sup>47</sup>	NOS ESA Reference <sup>48</sup>
Safety Management			
2.1	Formulate National Policy for Explosive Substances and Articles	01.30	COGESA2.1
2.2	Determine the Classification of Ammunition	01.50	COGESA2.2
3.2.2A	Make Recommendations for the Classification of Ammunition	01.50	COGESA3.2.2A
2.3	Review the Factors Affecting the Safety of Specific Ammunition	02.10	COGESA2.3
3.2.3A	Make Recommendations on the Factors Affecting the Safety of Specific Ammunition	02.10	COGESA3.2.3A
2.4	Analyse the Acceptability of Safety Control Measures for Specific Ammunition	02.10	COGESA2.4
2.4A	Review Safety Control Measures for Specific Ammunition	02.10	COGESA3.2.4A
2.5	Review an Organisation’s Safety Management System for Explosives	02.10	COGESA2.5

<sup>45</sup> See Note 1 to Clause 6 on competence versus role.

<sup>46</sup> The IATG competence code equates to the numbers of the NOS ESA Reference for ease of future amendment.

<sup>47</sup> The task primarily falls within the requirements of the IATG listed.

<sup>48</sup> Details of the Performance Criteria and Knowledge Requirements for each competence can be obtained from the documents held by UN ODA and also reproduced on the IATG SaferGuard website. One example is included in IATG in order that users may understand the system and is at Annex J.

<b>Competence: Ammunition Inspector <sup>45</sup></b>			
2.5A	Assess an Organisation's Explosives Safety Management System	06.70	COGESA3.2.5A
2.6	Develop the Organisational Safety Policy and/or Strategy for Explosives	01.30	COGESA2.6
2.7	Implement the Organisational Safety Policy and/or Strategy for Explosives	01.30	COGESA2.7
2.8	Analyse and Identify Aggregated Hazards and Risks for Explosives	02.10	COGESA2.8
3.2.8A	Assess the Suitability of Explosives Facilities	02.10 02.20	COGESA3.2.8A
2.9	Determine and Implement Aggregated Risk Control Measures for Explosives	02.10 06.10	COGESA2.9
3.2.9A	Implement Risk Control Measures for Ammunition Safety	06.10	COGESA3.2.9A
2.10	Develop and Implement Assurance Systems for Explosives Safety	02.10 06.10	COGESA2.10
3.2.10A	Carry Out Assurance Audit of Systems for Explosives Safety	06.70	COGESA3.2.10A
2.11	Develop Emergency Response Systems and Procedures for Explosives Safety	02.10 11.10	COGESA2.11
2.12	Investigate Explosives-Related Safety Incidents	11.10	COGESA2.12
3.2.12A	Contribute to the Investigation of Explosives Safety Incidents	11.10	COGESA3.2.12A
2.13	Assess Explosives Licence Applications	02.20 02.30 02.40	COGESA2.13
2.14	Prepare and Submit an Explosives Licence Application	02.20 02.30	COGESA2.14
<b>Maintenance (Inspection, Repair, Surveillance and Proof)</b>			
5.1	Plan the Maintenance Programme for Ammunition	07.20	COGESA5.1
5.2	Manage the Maintenance Programme for Ammunition	01.30 07.20	COGESA5.2
5.3	Manage the Maintenance Plan for Ammunition	01.30 07.20	COGESA5.3
5.4	Implement the Inspection of Ammunition	07.20 07.30	COGESA5.4
5.5	Implement the Adjustment of Ammunition	07.20 07.30	COGESA5.5
5.6	Implement the Complex Removal of Ammunition	07.20 07.30	COGESA5.6
5.7	Implement the Routine Removal of Ammunition	07.20 07.30	COGESA5.7
5.8	Implement the Complex Assembly of Ammunition	07.20 07.30	COGESA5.8
5.9	Implement the Routine Assembly of Ammunition	07.20 07.30	COGESA5.9
5.10	Assess the Feasibility of an Explosive Substance or Article Repair	01.50	COGESA5.10

<b>Competence: Ammunition Inspector <sup>45</sup></b>			
5.11	Implement the Complex Repair of Ammunition	07.20 07.30	COGESA5.11
5.12	Implement the Routine Repair of Ammunition	07.20 07.30	COGESA5.12
5.13	Plan Configuration Activities for Ammunition	07.20 07.30	COGESA5.13
5.14	Manage Configuration Activities for Ammunition	07.20 07.30	COGESA5.14
5.15	Implement Configuration Activities for Ammunition	07.20 07.30	COGESA5.15
5.16	Audit the Effectiveness of Configuration Activities for Ammunition	06.70	COGESA5.16
<b>Procurement</b>			
6.2	Define the Procurement Strategy for Ammunition	01.30	COGESA6.2
6.3	Contribute to the Identification of the Requirement and Specification for Ammunition	01.30	COGESA6.3
6.5	Provide Explosives-Related Technical Input to Assist in Identifying Potential Suppliers and/or Articles	N/A	COGESA6.5
6.8	Manage the Contract for the Supply of Ammunition	N/A	COGESA6.8
6.9	Ensure Compliance with Contract Terms for the Supply of Ammunition	N/A	COGESA6.9
<b>Storage</b>			
7.1	Move Ammunition Manually	03.20 06.30	COGESA7.1
7.2	Supervise the Placing of Ammunition into Storage	03.20 06.30	COGESA7.2
7.3	Receive and Place Ammunition into Storage	03.20 06.30	COGESA7.3
7.4	Supervise the Receiving of Ammunition into Storage	03.20 06.30	COGESA7.4
7.5	Supervise the Maintenance of Storage Conditions for Ammunition	06 Series	COGESA7.5
7.6	Maintain the Quality of Ammunition in Storage	06 Series	COGESA7.6
7.7	Select and Prepare Ammunition for Despatch	03.20 06.30	COGESA7.7
7.8	Despatch Ammunition	03.20 06.30	COGESA7.8
7.9	Supervise the Selection, Preparation and Despatch of Ammunition	03.20 06.30	COGESA7.9
7.10	Manage the Receipt of Ammunition	03.20 06.30	COGESA7.10
7.11	Manage the Storage of Ammunition	06 Series	COGESA7.11
7.12	Manage the Despatch of Ammunition	03.20 06.30	COGESA7.12
7.13	Manage Stock Levels and Stock Inventories of Ammunition	03.10	COGESA7.13

<b>Competence: Ammunition Inspector <sup>45</sup></b>			
7.14	Audit Stock Levels and Stock Inventories for Ammunition	03.10 03.20	COGESA7.14
7.15	Carry Out Stock Checks of Ammunition	03.10 03.20	COGESA7.15
7.16	Maintain Stock Control Systems for Ammunition	03.10 03.20	COGESA7.16
7.17	Operate Specialized Plant and Machinery to Performance Requirements for Ammunition	05.50	COGESA7.17
7.18	Lift, Transfer and Position Ammunition Loads	06.30	COGESA7.18
7.19	Accurately account for the issue, receipt or storage of ammunition by batch/lot/BKI number.	03.10	N/A
<b>Transport</b>			
8.1A	Plan and Manage the Safe and Secure Transportation by Road of Explosive Substances and Articles	08.10 09.10	COGESA8.1A
8.1B	Plan and Manage the Safe and Secure Transportation by Rail of Explosive Substances and Articles	08.10 09.10	COGESA8.1B
8.1C	Plan and Manage the Safe and Secure Transportation by Sea of Explosive Substances and Articles	08.10 09.10	COGESA8.1C
8.1D	Plan and Manage the Safe and Secure Transportation by Air of Explosive Substances and Articles	08.10 09.10	COGESA8.1D
8.2	Obtain Information on the Ammunition Load	01.50	COGESA8.2
8.3A	Plan the Route and Timings for the Delivery and Collection of Ammunition by Road	08.10 09.10	COGESA8.3A
8.3B	Obtain Information on the Destination and Schedule of the Ammunition Load by Rail	08.10 09.10	COGESA8.3B
8.3C	Obtain Information on the Destination and Schedule of the Ammunition Load by Sea	08.10 09.10	COGESA8.3C
8.3D	Obtain Information on the Destination and Schedule of the Ammunition Load by Air	08.10 09.10	COGESA8.3D
8.4	Load the Vehicle with Ammunition <sup>49</sup>	08.10	COGESA8.4
8.5	Supervise the Loading of the Vehicle with Ammunition by Others	08.10	COGESA8.5
8.6	Unload Ammunition from the Vehicle	08.10	COGESA8.6
8.7	Supervise the Unloading of Ammunition from the Vehicle by Others	08.10	COGESA8.7
<b>Explosive Facilities Management</b>			
9.1	Define Explosives Facilities Requirement	02.20 02.30 02.40	COGESA9.1
9.2	Ensure Explosives Facilities are Fit for Purpose	06.70	COGESA9.2
9.3	Conduct Safety Checks on Explosives Facilities	06.70	COGESA9.3

<sup>49</sup> The Driver of the vehicle, and the management of his organization, is responsible for ensuring that the vehicle is of an appropriate type to carry explosives and has all the relevant safety equipment and hazard signs. See *United Nations Recommendations on the Transport of Dangerous Goods Model Regulations*, (Eighteenth revised edition), ST/SG/AC.10/1/Rev.18, (ISBN 978-92-1-139146Ed-6), New York and Geneva, United Nations, 2013. (Referred to as the *UN Model Regulations*).

<b>Competence: Ammunition Inspector <sup>45</sup></b>			
9.4	Develop and Implement the Explosives Facility Decommissioning Plan	10.10	COGESA9.4
9.5	Conduct Decommissioning Tasks on Explosives Facility	10.10	COGESA9.5
<b>Disposal</b>			
11.1	Assess the Ammunition for Disposal	07.20	COGESA11.1
11.2	Determine the Existence of a Suitable Disposal Procedure for Ammunition	Demil Task	COGESA11.2
11.3	Adapt an Existing Disposal Procedure for Ammunition	Demil Task	COGESA11.3
11.4	Design a New Disposal Procedure for Ammunition	Demil Task	COGESA11.4
11.5	Plan the Disposal of Explosives Substances and/or Articles (Complex)	10.10	COGESA11.5
11.6	Plan the Disposal of Explosives Substances and/or Articles (Non-Complex)	10.10	COGESA11.6
11.7	Manage Tasks for the Disposal of Ammunition	Demil Task	COGESA11.7
11.8	Carry Out Pre-Disposal Tasks for Ammunition	Demil Task	COGESA11.8
11.9	Contribute to Pre-Disposal Tasks for Ammunition	Demil Task	COGESA11.9
11.10	Dispose of Ammunition by Complex Mechanical Breakdown Procedures	Demil Task	COGESA11.10
11.11	Dispose of Ammunition by Complex Chemical Breakdown Procedures	Demil Task	COGESA11.11
11.12	Dispose of Ammunition by Complex Biological Breakdown Procedures	Demil Task	COGESA11.12
11.13	Dispose of Ammunition by Complex Burning Procedures	Demil Task	COGESA11.13
11.14	Dispose of Ammunition by Complex Incineration Procedures	Demil Task	COGESA11.14
11.15	Dispose of Ammunition by Complex Deflagration Procedures	Demil Task	COGESA11.15
11.16	Dispose of Ammunition by Complex Detonation Procedures	Demil Task	COGESA11.16
11.10A	Dispose of Ammunition by Non-Complex Mechanical Breakdown Procedures	Demil Task	COGESA11.10A
11.11A	Dispose of Ammunition by Non-Complex Chemical Breakdown Procedures	Demil Task	COGESA11.11A
11.12A	Dispose of Ammunition by Non-Complex Biological Breakdown Procedures	Demil Task	COGESA11.12A
11.13A	Dispose of Ammunition by Non-Complex Burning Procedures	Demil Task	COGESA11.13A
11.14A	Dispose of Ammunition by Non-Complex Incineration Procedures	Demil Task	COGESA11.14A
11.15A	Dispose of Ammunition by Non-Complex Deflagration Procedures	Demil Task	COGESA11.15A

<b>Competence: Ammunition Inspector <sup>45</sup></b>			
11.16A	Dispose of Ammunition by Non-Complex Detonation Procedures	Demil Task	COGESA11.16A
11.17	Dispose of Ammunition by Function as Intended Procedures	Demil Task	COGESA11.17
11.18	Contribute to the Ammunition Disposal Task	Demil Task	COGESA11.18
11.19	Carry Out Post-Disposal Tasks for Ammunition	Demil Task	COGESA11.19
11.20	Contribute to Post-Disposal Tasks for Ammunition	Demil Task	COGESA11.20
<b>Generic Applications</b>			
13.1	Work Effectively in a Team Involved in Activities for Ammunition	N/A	COGESA13.1
LA1	Manage your own Resources	N/A	CFAMLA1
LA2	Manage your own Resources and Professional Development	N/A	CFAMLA2
13.4	Manage Continuous Improvement in Activities for Explosive Substances and Articles	N/A	COGESA13.4
LD5	Allocate and Check Work in your Team	N/A	CFAMLD5
LB5	Provide Leadership for your Team	N/A	CFAMLB5
LB6	Provide Leadership in your Area of Responsibility	N/A	CFAMLB6
IO3.13	Conduct an Assessment of Risks in the Workplace in Processing Industries Operations	02.10	COGIO3.13
SA13.9	Provide Technical or Safety Advice and/or Guidance to Others on Explosives	All	COGESA13.9
SA13.10	Make Presentations on Explosives Matters	N/A	COGESA13.10
SA13.14	Manage Equipment in an Explosives Environment	05.50	COGESA13.14
SA13.15	Prepare and Care for Equipment in an Explosives Environment	05.50	COGESA13.15
SA13.16	Manage Explosives Safely	All	COGESA13.16
SA13.17	Certify as Free from Explosives (FFE)	07.30	COGESA13.17
SA13.18	Supervise Explosives Safety	All	COGESA13.18

## Annex J (normative)

### Example Competence Criteria and Requirements <sup>50</sup>

<sup>50</sup> Details of the Performance Criteria and Knowledge Requirements for each competence in IATG can be obtained from the documents held by UN ODA and also reproduced on the IATG SaferGuard website. Alternatively enter the search term 'Explosives' in this website <http://www.ukstandards.org.uk/> to obtain all relevant NOS on the explosives sector.

Details of the Performance Criteria and Knowledge Requirements for each competence in IATG can be obtained from the documents held by UN ODA and also reproduced on the IATG SaferGuard website. Alternatively enter the search term 'Explosives' in this website <http://www.ukstandards.org.uk/> to obtain all relevant NOS on the explosives sector.

Some examples follow of performance criteria and requirements for different competences.

IATG Code <sup>51</sup>	7.3	NOS ESA Reference	COGESA7.3
<b>Receive and Place Ammunition into Storage</b>			
<b>Performance Criteria</b>			
<i>You must be able to:</i>			
P1 Work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines.			
P2 Confirm that the transit, stabling and storage locations are suitable.			
P3 Adhere to the storage plan.			
P4 Use handling equipment correctly, to meet all tasking requirements.			
P5 Resolve any storage or resource problems, within your level of authority.			
P6 Confirm that the type, quality and quantity of the goods is in accordance with receipts documentation, and report any discrepancies.			
P7 Take action, in accordance with procedures, where explosive substances and/or articles are received in a suspect or damaged state.			
P8 Ensure that all documentation is correctly completed.			
<b>Knowledge and Understanding</b>			
<i>You need to know and understand:</i>			
K1 The health, safety and environmental and other statutory legislation, regulations and safe working practices and procedures governing explosives, and their implications for your area of work.			
K2 The relevance of personal protective equipment (PPE).			
K3 The actions to be taken in response to an unplanned event.			
K4 The storage needs, and any environmental conditions required.			
K5 The rules governing mixing hazard divisions and compatibility groups.			
K6 The resource requirements of the task.			
K7 What could go wrong with the explosive substances and/or articles, and the action you should take.			
K8 How to implement contingency plans.			
K9 Stock receipt, recording and controlling systems.			
K10 How to give and receive constructive feedback.			
K11 Your level of authority.			
K12 When and from whom to seek advice or assistance.			

<sup>51</sup> The code equates to the numbers of the NOS ESA Reference for ease of future amendment.

<b>IATG Code<sup>52</sup></b>	2.1	<b>NOS ESA Reference</b>	COGESA2.1
<b>Formulate National Policy for Explosive Substances and Articles</b>			
<b>Performance Criteria</b>			
<i>You must be able to:</i>			
P1 Work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines.			
P2 Establish the extent to which a relevant national policy currently exists.			
P3 Identify areas for improvement in the existing national policy.			
P4 Identify the need for new policy, where none currently exists.			
P5 Recommend changes that address the areas for improvement.			
P6 Establish the constraints that may influence the policy.			
P7 Evaluate the potential impact of the proposed policy.			
P8 Secure commitment from appropriate stakeholders to the proposed policy.			
P9 Review periodically the extent to which the policy delivers requirements.			
P10 Confirm that your recommendations, and their implications, are clearly understood.			
P11 Publish the policy, in the appropriate format.			
<b>Knowledge and Understanding</b>			
<i>You need to know and understand:</i>			
K1 The health, safety and environmental and other statutory legislation, regulations and safe working practices and procedures governing explosives, and their implications for your area of the following.			
K2 The relevance of personal protective equipment (PPE).			
K3 The nature, characteristics, hazards and risks of the explosive substances and/or articles.			
K4 The actions to be taken in response to an unplanned event.			
K5 The interface between the explosives safety policy and other relevant safety and environmental policies.			
K6 The nature of any constraints (including international requirements).			
K7 Best practice in explosives safety management.			
K8 The acceptability of risk to society, relating to explosives.			
K9 Key organizations in the explosives industry, and the nature of their interest.			
K10 The stakeholders, and the nature of their interest.			
K11 The potential impact of your recommendations.			
K12 The role and mechanisms of the consultative process.			

<sup>52</sup> The code equates to the numbers of the NOS ESA Reference for ease of future amendment.

## Annex K (normative) Full List of Competences <sup>53</sup>

Explosive Sector Competences			
Code <sup>54</sup>	Competencies	IATG <sup>55</sup>	NOS ESA Reference <sup>56</sup>
<b>Research, Design and Development</b>			
1.1	Create the Complex Specification for Ammunition	Research Role <sup>57</sup>	COGESA1.1
1.2	Create the Specification for an Explosive Substance or Article	01.50	COGESA1.2
1.3	Assimilate and Evaluate the Information on Ammunition	Research Role	COGESA1.3
1.4	Gather and Interpret the Information on Ammunition	Research Role	COGESA1.4
1.5	Identify and Gather the Information on Ammunition	Research Role	COGESA1.5
1.6	Prepare the Research Strategy for Ammunition	Research Role	COGESA1.6
1.7	Prepare the Research Programme for Ammunition	Research Role	COGESA1.7
1.8	Submit Proposals for Research Work for Ammunition	Research Role	COGESA1.8
1.9	Plan the Research into Ammunition	Research Role	COGESA1.9
1.10	Carry Out the Research Strategy and Analyse the Information Collected on Ammunition	Research Role	COGESA1.10
1.11	Carry Out Investigations and Analyse the Information Collected on Ammunition	11.10	COGESA1.11
1.12	Contribute to Carrying Out Investigations and Analysing the Information Collected on Ammunition	11.10	COGESA1.12
1.13	Evaluate and Document Complex Research and Findings on Ammunition	Research Role	COGESA1.13
1.14	Assess and Document Research and Findings on Ammunition	Research Role	COGESA1.14
1.15	Develop a Dissemination Plan for Ammunition	Research Role	COGESA1.15
1.16	Carry Out Small Scale Processing for Ammunition	07.20 07.30	COGESA1.16
1.17	Design the Scale-Up Process for Ammunition	Research Role	COGESA1.17
1.18	Create the Specification for the Design of Complex Explosive Articles	Research Role	COGESA1.18
1.19	Create the Specification for the Design of an Explosive Article	Research Role	COGESA1.19
1.20	Identify and Analyse the Factors Applicable to the Explosive Article Design Specification	Research Role	COGESA1.20

<sup>53</sup> This is the full list of explosive sector competences from the UK ESA NOS. Many of this do not apply to conventional ammunition stockpile management, but have been included for information.

<sup>54</sup> The code equates to the numbers of the NOS ESA Reference for ease of future amendment.

<sup>55</sup> The task primarily falls within the requirements of the IATG listed.

<sup>56</sup> Details of the Performance Criteria and Knowledge Requirements for each competence can be obtained from the documents held by UN ODA and also reproduced on the IATG SaferGuard website.

<sup>57</sup> Ammunition Inspector (Level 5) with an MSc in an appropriate subject may be capable of this task.

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
1.21	Generate Design Options for Explosive Articles	Research Role	COGESA1.21
1.22	Evaluate Design Options for Explosive Articles	Research Role	COGESA1.22
1.23	Gather Information to Assist in Generating Explosive Article Design Options	Research Role	COGESA1.23
1.24	Build Prototype(s) of Selected Design(s) for Complex Explosive Articles	Research Role	COGESA1.24
1.25	Build Prototype(s) of Selected Design(s) for Explosive Articles	Research Role	COGESA1.25
2-03	Use Information Recording Systems for Scientific or Technical Activities	Research Role	SEMLATA2-03
2-04	Carry Out Routine Maintenance, Cleaning and Checking of Scientific or Technical Equipment	Research Role	SEMLATA2-04
2-05	Maintain Stocks of Resources, Equipment and Consumables for Scientific or Technical Use	Research Role	SEMLATA2-05
2-06	Prepare Compounds and Solutions for Scientific or Technical Use	Research Role	SEMLATA2-06
2-07	Demonstrate Scientific or Technical Methods, Techniques and Skills to Others in the Workplace	Research Role	SEMLATA2-07
2-08	Prepare Resources and Equipment for Scientific or Technical Learning Activities	Research Role	SEMLATA2-08
2-10	Provide Support for Scientific or Technical Learning Activities	Research Role	SEMLATA2-10
2-11	Prepare New Scientific or Technical Methods, Resources and Equipment for Learning Activities	Research Role	SEMLATA2-11
2-12	Carry Out Simple Scientific or Technical Tests Using Manual Equipment	Research Role	SEMLATA2-12
2-13	Carry Out Simple Scientific or Technical Tests Using Automated Equipment	Research Role	SEMLATA2-13
2-14	Prepare Scientific or Technical Samples for Testing Activities	Research Role	SEMLATA2-14
2-15	Carry Out Sampling Operations for Scientific or Technical Tests	Research Role	SEMLATA2-15
3-03	Carry Out Scientific or Technical Testing Operations	Research Role	SEMLATA3-03
3-03	Assess and Communicate Scientific or Technical Information to Authorised Personnel	Research Role	SEMLATA3-04
3-05	Provide Technical Advice and Guidance for Scientific or Technical Activities	Research Role	SEMLATA3-05
3-06	Plan Scientific or Technical Sampling and Testing Activities	Research Role	SEMLATA3-06
3-07	Carry Out Complex Scientific or Technical Testing Operations	Research Role	SEMLATA3-07
3-08	Carry Out Complex Scientific or Technical Sampling Operations	Research Role	SEMLATA3-08
3-09	Carry Out Scientific or Technical Investigations	Research Role	SEMLATA3-09
3-10	Carry Out Small Scale Processing	07.20	SEMLATA3-10
3-11	Diagnose Faults, Repair and Maintain Scientific or Technical Equipment for Workplace Activities	Research Role	SEMLATA3-11

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
3-12	Measuring, Weighing and Preparing Compounds and Solutions for Laboratory Use	Research Role	SEMLATA3-12
3-13	Maintain and Control Stocks of all Resources, Equipment and Consumables for Workplace Scientific or Technical Activities	03.10	SEMLATA3-13
3-16	Provide Training for Scientific or Technical Activities in the Workplace	Research Role	SEMLATA3-16
3-19	Evaluate and Provide Scientific or Technical Assistance for Learning Activities	Research Role	SEMLATA3-19
3-20	Demonstrate Scientific or Technical Methods, Techniques and Skills to Others in the Workplace	Research Role	SEMLATA3-20
3-21	Improve the Quality and Reliability of Scientific or Technical Activities in the Workplace	Research Role	SEMLATA3-21
3-22	Test and Evaluate New Scientific or Technical Methods and Equipment for Learning Activities	Research Role	SEMLATA3-22
4-0	Plan and Run Scientific or Technical Projects for Workplace Activities	Research Role	SEMLATA4-05
4-06	Write Scientific or Technical Reports for Workplace Activities	Research Role	SEMLATA4-06
4-09	Develop and Provide Training for Scientific or Technical Activities in the Workplace	Research Role	SEMLATA4-09
<b>Safety Management</b>			
2.1	Formulate National Policy for Explosive Substances and Articles	01.30	COGESA2.1
2.2	Determine the Classification of Ammunition	01.50	COGESA2.2
3.2.2A	Make Recommendations for the Classification of Ammunition	01.50	COGESA3.2.2A
2.3	Review the Factors Affecting the Safety of Specific Ammunition	02.10	COGESA2.3
3.2.3A	Make Recommendations on the Factors Affecting the Safety of Specific Ammunition	02.10	COGESA3.2.3A
2.4	Analyse the Acceptability of Safety Control Measures for Specific Ammunition	02.10	COGESA2.4
2.4A	Review Safety Control Measures for Specific Ammunition	02.10	COGESA3.2.4A
2.5	Review an Organisation's Safety Management System for Explosives	02.10	COGESA2.5
2.5A	Assess an Organisation's Explosives Safety Management System	06.70	COGESA3.2.5A
2.6	Develop the Organisational Safety Policy and/or Strategy for Explosives	01.30	COGESA2.6
2.7	Implement the Organisational Safety Policy and/or Strategy for Explosives	01.30	COGESA2.7
2.8	Analyse and Identify Aggregated Hazards and Risks for Explosives	02.10	COGESA2.8
3.2.8A	Assess the Suitability of Explosives Facilities	02.10 02.20	COGESA3.2.8A
2.9	Determine and Implement Aggregated Risk Control Measures for Explosives	02.10 06.10	COGESA2.9

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
3.2.9A	Implement Risk Control Measures for Ammunition Safety	06.10	COGESA3.2.9A
2.10	Develop and Implement Assurance Systems for Explosives Safety	02.10 06.10	COGESA2.10
3.2.10A	Carry Out Assurance Audit of Systems for Explosives Safety	06.70	COGESA3.2.10A
2.11	Develop Emergency Response Systems and Procedures for Explosives Safety	02.10 11.10	COGESA2.11
2.12	Investigate Explosives-Related Safety Incidents	11.10	COGESA2.12
3.2.12A	Contribute to the Investigation of Explosives Safety Incidents	11.10	COGESA3.2.12A
2.13	Assess Explosives Licence Applications	02.20 02.30 02.40	COGESA2.13
2.14	Prepare and Submit an Explosives Licence Application	02.20 02.30	COGESA2.14
<b>Test and Evaluation</b>			
3.1	Establish the Performance Criteria for Ammunition	N/A	COGESA3.1
3.2	Determine the Existence of a Suitable Trial or Test Procedure for Ammunition	02.10	COGESA3.2
3.3	Design a New Trial Procedure for Ammunition	TCO <sup>58</sup> Task	COGESA3.3
3.4	Design a New Test Procedure for Ammunition	TCO Task	COGESA3.4
3.5	Adapt an Existing Trial Procedure for Ammunition	TCO Task	COGESA3.5
3.6	Adapt an Existing Test Procedure for Ammunition	TCO Task	COGESA3.6
3.7	Validate a Trial or Test Procedure for Ammunition	TCO Task	COGESA3.7
3.8	Plan the Trial of Ammunition	TCO Task	COGESA3.8
3.9	Plan the Test of Ammunition	TCO Task	COGESA3.9
3.10	Manage the Trial of Ammunition	TCO Task	COGESA3.10
3.11	Manage the Test of Ammunition	TCO Task	COGESA3.11
3.12	Carry Out Pre-trial or Pre-Test Tasks Relating to Ammunition	TCO Task	COGESA3.12
3.13	Contribute to Pre-Trial or Pre-Test Tasks Relating to Ammunition	TCO Task	COGESA3.13
3.14	Carry Out Trials of Ammunition	TCO Task	COGESA3.14
3.15	Carry Out Tests of Ammunition	TCO Task	COGESA3.15

<sup>58</sup> Trials Conducting Officer. (Ammunition Inspector Level 5 is generally qualified for this role)

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
3.16	Contribute to Conducting Trial or Test of Ammunition	TCO Task	COGESA3.16
3.17	Evaluate the Results of Trials of Ammunition	TCO Task	COGESA3.17
3.18	Evaluate the Results of Tests of Ammunition	TCO Task	COGESA3.18
3.19	Carry Out Post-Trial or Post-Test Tasks Relating to Ammunition	TCO Task	COGESA3.19
3.20	Contribute to Post-Trial or Post-Test Tasks Relating to Ammunition	TCO Task	COGESA3.20
<b>Manufacture</b>			
4.1	Develop and Update Explosives Standard Operating Procedure/s	01.30 02.10	COGESA4.1
4.2	Contribute to the Validation and Optimisation of New or Modified Explosives Processes and Equipment	Manufacture Task	COGESA4.2
4.3	Resolve Explosives Operational Problems	Manufacture Task	COGESA4.3
4.4	Prepare the Explosives Process Area and Equipment	06 Series	COGESA4.4
4.5	Move Materials Within the Explosives Process	08.10	COGESA4.5
4.6	Prepare Explosives Process Materials	Manufacture Task	COGESA4.6
4.7	Supervise the Preparation of the Explosives Processing Operation	Manufacture Task	COGESA4.7
4.8	Monitor and Control Explosives Processing	Manufacture Task	COGESA4.8
4.9	Supervise Explosives Processing	Manufacture Task	COGESA4.9
4.10	Solve Explosives Process Problems	Manufacture Task	COGESA4.10
4.10	Shut Down the Explosives Process	Manufacture Task	COGESA4.11
4.10	Supervise the Shutdown of Explosives Processing	Manufacture Task	COGESA4.12
4.10	Separate Recoverable Materials and Waste Produced by the Explosive Process	Manufacture Task	COGESA4.13
4.14	Contribute to Explosives Standard Operating Procedure/s (SOP)	All	COGESA4.14
<b>Maintenance (Inspection, Repair, Surveillance and Proof)</b>			
5.1	Plan the Maintenance Programme for Ammunition	07.20	COGESA5.1
5.2	Manage the Maintenance Programme for Ammunition	01.30 07.20	COGESA5.2
5.3	Manage the Maintenance Plan for Ammunition	01.30 07.20	COGESA5.3
5.4	Implement the Inspection of Ammunition	07.20 07.30	COGESA5.4
5.5	Implement the Adjustment of Ammunition	07.20 07.30	COGESA5.5
5.6	Implement the Complex Removal of Ammunition	07.20 07.30	COGESA5.6
5.7	Implement the Routine Removal of Ammunition	07.20 07.30	COGESA5.7

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
5.8	Implement the Complex Assembly of Ammunition	07.20 07.30	COGESA5.8
5.9	Implement the Routine Assembly of Ammunition	07.20 07.30	COGESA5.9
5.10	Assess the Feasibility of an Explosive Substance or Article Repair	01.50	COGESA5.10
5.11	Implement the Complex Repair of Ammunition	07.20 07.30	COGESA5.11
5.12	Implement the Routine Repair of Ammunition	07.20 07.30	COGESA5.12
5.13	Plan Configuration Activities for Ammunition	07.20 07.30	COGESA5.13
5.14	Manage Configuration Activities for Ammunition	07.20 07.30	COGESA5.14
5.15	Implement Configuration Activities for Ammunition	07.20 07.30	COGESA5.15
5.16	Audit the Effectiveness of Configuration Activities for Ammunition	06.70	COGESA5.16
5.17	Accurately account for the processing of ammunition by batch/lot/BKI number.	03.10	N/A
<b>Procurement</b>			
6.1	Identify the Requirement and Specification for Ammunition	N/A	COGESA6.1
6.2	Define the Procurement Strategy for Ammunition	01.30	COGESA6.2
6.3	Contribute to the Identification of the Requirement and Specification for Ammunition	01.30	COGESA6.3
6.4	Identify Potential Suppliers of Ammunition	N/A	COGESA6.4
6.5	Provide Explosives-Related Technical Input to Assist in Identifying Potential Suppliers and/or Articles	N/A	COGESA6.5
6.6	Negotiate and Award Contracts for Ammunition	N/A	COGESA6.6
6.7	Place Orders for the Supply of Ammunition	N/A	COGESA6.7
6.8	Manage the Contract for the Supply of Ammunition	N/A	COGESA6.8
6.9	Ensure Compliance with Contract Terms for the Supply of Ammunition	N/A	COGESA6.9
<b>Storage</b>			
7.1	Move Ammunition Manually	03.20 06.30	COGESA7.1
7.2	Supervise the Placing of Ammunition into Storage	03.20 06.30	COGESA7.2
7.3	Receive and Ammunition into Storage	03.20 06.30	COGESA7.3
7.4	Supervise the Receiving of Ammunition into Storage	03.20 06.30	COGESA7.4
7.5	Supervise the Maintenance of Storage Conditions for Ammunition	06 Series	COGESA7.5

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
7.6	Maintain the Quality of Ammunition in Storage	06 Series	COGESA7.6
7.7	Select and Prepare Ammunition for Despatch	03.20 06.30	COGESA7.7
7.8	Despatch Ammunition	03.20 06.30	COGESA7.8
7.9	Supervise the Selection, Preparation and Despatch of Ammunition	03.20 06.30	COGESA7.9
7.10	Manage the Receipt of Ammunition	03.20 06.30	COGESA7.10
7.11	Manage the Storage of Ammunition	06 Series	COGESA7.11
7.12	Manage the Despatch of Ammunition	03.20 06.30	COGESA7.12
7.13	Manage Stock Levels and Stock Inventories of Ammunition	03.10	COGESA7.13
7.14	Audit Stock Levels and Stock Inventories for Ammunition	03.10 03.20	COGESA7.14
7.15	Carry Out Stock Checks of Ammunition	03.10 03.20	COGESA7.15
7.16	Maintain Stock Control Systems for Ammunition	03.10 03.20	COGESA7.16
7.17	Operate Specialized Plant and Machinery to Performance Requirements for Ammunition	05.50	COGESA7.17
7.18	Lift, Transfer and Position Ammunition Loads	06.30	COGESA7.18
7.19	Accurately account for the issue, receipt or storage of ammunition by batch/lot/BKI number.	03.10	N/A
<b>Transport</b>			
8.1A	Plan and Manage the Safe and Secure Transportation by Road of Explosive Substances and Articles	08.10 09.10	COGESA8.1A
8.1B	Plan and Manage the Safe and Secure Transportation by Rail of Explosive Substances and Articles	08.10 09.10	COGESA8.1B
8.1C	Plan and Manage the Safe and Secure Transportation by Sea of Explosive Substances and Articles	08.10 09.10	COGESA8.1C
8.1D	Plan and Manage the Safe and Secure Transportation by Air of Explosive Substances and Articles	08.10 09.10	COGESA8.1D
8.2	Obtain Information on Explosive Substances and Articles Load	01.50	COGESA8.2
8.3A	Plan the Route and Timings for the Delivery and Collection of Explosive Substances and Articles by Road	08.10 09.10	COGESA8.3A
8.3B	Obtain Information on the Destination and Schedule of the Explosive Load by Rail	08.10 09.10	COGESA8.3B
8.3C	Obtain Information on the Destination and Schedule of the Explosive Load by Sea	08.10 09.10	COGESA8.3C
8.3D	Obtain Information on the Destination and Schedule of the Explosive Load by Air	08.10 09.10	COGESA8.3D
8.4	Load the Vehicle with Explosive Substances and Articles	08.10	COGESA8.4

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
8.5	Supervise the Loading of the Vehicle with Explosive Substances and Articles by Others	08.10	COGESA8.5
8.6	Unload Explosive Substances and Articles from the Vehicle	08.10	COGESA8.6
8.7	Supervise the Unloading of Explosive Substances and Articles from the Vehicle by Others	08.10	COGESA8.7
GV1	Prepare the Vehicle for Driving	N/A	SFLDGV1
GV2	Protect the Vehicle and the Load	N/A	SFLDGV2
GV3	Operate and Monitor the Vehicle Systems	N/A	SFLDGV3
GV4	Manoeuvre the Vehicle in Restricted Spaces	N/A	SFLDGV4
GV5	Drive the Vehicle on Public Roads in a Fuel Efficient Manner	N/A	SFLDGV5
GV10	Couple and Uncouple the Vehicle	N/A	SFLDGV10
8.14B	Couple and Uncouple the Train	N/A	COGESA8.14B
8.15	Escort the Explosive Substances and Articles Load	08.10	COGESA8.15
<b>Explosive Facilities Management</b>			
9.1	Define Explosives Facilities Requirement	02.20 02.30 02.40	COGESA9.1
9.2	Ensure Explosives Facilities are Fit for Purpose	06.70	COGESA9.2
9.3	Conduct Safety Checks on Explosives Facilities	06.70	COGESA9.3
9.4	Develop and Implement the Explosives Facility Decommissioning Plan	10.10	COGESA9.4
9.5	Conduct Decommissioning Tasks on Explosives Facility	10.10	COGESA9.5
BL2	Contribute to Health and Safety in the Blasting Workplace	N/A	PROBL2
BL3	Receive, Store and Issue Explosive Materials	03.10 03.20	PROBL3
BL4	Receive and Handle Explosive Materials On-Site	03.10 03.20	PROBL4
BL5	Charge Blast Holes to Specification	N/A	PROBL5
BL6	Blast to Specification	N/A	PROBL6
BL7	Deal with Misfires	N/A	PROBL7
BL8	Determine the Blast Requirements	N/A	PROBL8
BL9	Design and Arrange for the Authorisation of the Blast Specification	N/A	PROBL9
BL10	Produce Profiles of Rock Faces and Landforms	N/A	PROBL10
BL11	Supervise the Blasting Operation	N/A	PROBL11
BL16	Contribute to an Efficient and Effective Drilling or Blasting Environment	N/A	PROBL16
<b>Other Applications</b>			
10.12	Design the Complex Explosive Display	EOD Task	COGESA10.12
10.13	Design the Explosive Display	EOD Task	COGESA10.13

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
10.14	Prepare and Position Explosive Effects	EOD Task	COGESA10.14
10.15	Contribute to the Preparation and Positioning of Explosive Effects	EOD Task	COGESA10.15
10.16	Initiate the Explosive Effect	EOD Task	COGESA10.16
10.17	Modify Explosive Effects Delivery Systems	EOD Task	COGESA10.17
<b>Disposal</b>			
11.1	Assess the Ammunition for Disposal	07.30	COGESA11.1
11.2	Determine the Existence of a Suitable Disposal Procedure for Ammunition	Demil Task	COGESA11.2
11.3	Adapt an Existing Disposal Procedure for Ammunition	Demil Task	COGESA11.3
11.4	Design a New Disposal Procedure for Ammunition	Demil Task	COGESA11.4
11.5	Plan the Disposal of Explosives Substances and/or Articles (Complex)	10.10	COGESA11.5
11.6	Plan the Disposal of Explosives Substances and/or Articles (Non-Complex)	10.10	COGESA11.6
11.7	Manage Tasks for the Disposal of Ammunition	Demil Task	COGESA11.7
11.8	Carry Out Pre-Disposal Tasks for Ammunition	Demil Task	COGESA11.8
11.9	Contribute to Pre-Disposal Tasks for Ammunition	Demil Task	COGESA11.9
11.10	Dispose of Ammunition by Complex Mechanical Breakdown Procedures	Demil Task	COGESA11.10
11.11	Dispose of Ammunition by Complex Chemical Breakdown Procedures	Demil Task	COGESA11.11
11.12	Dispose of Ammunition by Complex Biological Breakdown Procedures	Demil Task	COGESA11.12
11.13	Dispose of Ammunition by Complex Burning Procedures	Demil Task	COGESA11.13
11.14	Dispose of Ammunition by Complex Incineration Procedures	Demil Task	COGESA11.14
11.15	Dispose of Ammunition by Complex Deflagration Procedures	Demil Task	COGESA11.15
11.16	Dispose of Ammunition by Complex Detonation Procedures	Demil Task	COGESA11.16
11.10A	Dispose of Ammunition by Non-Complex Mechanical Breakdown Procedures	Demil Task	COGESA11.10A
11.11A	Dispose of Ammunition by Non-Complex Chemical Breakdown Procedures	Demil Task	COGESA11.11A
11.12A	Dispose of Ammunition by Non-Complex Biological Breakdown Procedures	Demil Task	COGESA11.12A
11.13A	Dispose of Ammunition by Non-Complex Burning Procedures	Demil Task	COGESA11.13A

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
11.14A	Dispose of Ammunition by Non-Complex Incineration Procedures	Demil Task	COGESA11.14A
11.15A	Dispose of Ammunition by Non-Complex Deflagration Procedures	Demil Task	COGESA11.15A
11.16A	Dispose of Ammunition by Non-Complex Detonation Procedures	Demil Task	COGESA11.16A
11.17	Dispose of Ammunition by Function as Intended Procedures	Demil Task	COGESA11.17
11.18	Contribute to the Ammunition Disposal Task	Demil Task	COGESA11.18
11.19	Carry Out Post-Disposal Tasks for Ammunition	Demil Task	COGESA11.19
11.20	Contribute to Post-Disposal Tasks for Ammunition	Demil Task	COGESA11.20
<b>Munition Clearance and Search</b>			
12.1	Plan Munition Clearance and Search Operations and Programmes	EOD Task	COGESA12.1
12.2	Manage Munition Clearance and Search Operations and Programmes	EOD Task	COGESA12.2
12.3	Evaluate and Improve the Effectiveness of Munition Clearance and Search Operations and Programmes	EOD Task	COGESA12.3
12.4	Provide Advice on Munition Clearance and Search-Related Matters	EOD Task	COGESA12.4
12.5	Define the Boundaries of the Area to be Searched for Munitions	EOD Task	COGESA12.5
12.6	Identify and Record the Location and Disposition of Potential Munitions within Boundaries	EOD Task	COGESA12.6
12.7	Contribute to Locating the Disposition of Potential Munitions	EOD Task	COGESA12.7
12.8	Confirm the Presence of Munition(s)	EOD Task	COGESA12.8
12.9	Contribute to Confirming the Presence of Munition(s)	EOD Task	COGESA12.9
12.1A	Plan Specified Targets Search Operations	EOD Task	COGESA12.1A
12.2A	Manage Specified Targets Search Operations	EOD Task	COGESA12.2A
12.3A	Organise and Supervise the Delivery of Specified Targets Search Plans	EOD Task	COGESA12.3A
12.4A	Evaluate the Effectiveness of Specified Targets Search Operations	EOD Task	COGESA12.4A
12.5A	Provide Advice on Specified Targets Search Matters	EOD Task	COGESA12.5A
12.6A	Identify and Describe the Area to be Searched	EOD Task	COGESA12.6A
12.7A	Contribute to Identifying and Describing the Area to be Searched	EOD Task	COGESA12.7A

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
12.8A	Detect and Locate Specified Targets and Other Risks	EOD Task	COGESA12.8A
12.9A	Contribute to Locating and Gaining Access to Specified Targets	EOD Task	COGESA12.9A
12.10A	Assist in Searching for Specified Targets	EOD Task	COGESA12.10A
12.10	Remove the Threat of Munitions	EOD Task	COGESA12.10
12.11	Contribute to Removing the Threat of Munitions	EOD Task	COGESA12.11
12.12	Move and Transport Munitions	08.10 09.10	COGESA12.12
12.13	Contribute to the Movement or Transportation of Munitions	08.10 09.10	COGESA12.13
12.14	Enable Areas Cleared of Munitions or Specified Targets to be Remediated	EOD Task	COGESA12.14
12.15	Complete Munitions or Specified Targets Search Reports	EOD Task	COGESA12.15
12.16	Assist in Locating the Position of the Munition	EOD Task	COGESA12.16
12.17	Assist with the Movement and Transportation of Munitions	08.10 09.10	COGESA12.17
12.18	Use and Maintain Search or Munition Clearance Equipment	EOD Task	COGESA12.18
12.19	Assist with the Preparation, Maintenance and Use of Search or Munition Clearance Equipment	EOD Task	COGESA12.19
12.20	Work Safely	EOD Task	COGESA12.20
12.21	Evacuate Casualties	07.20 11.10	COGESA12.21
12.22	Develop your Competence in Working with Munitions or Specified Targets	EOD Task	COGESA12.22
<b>Generic Applications</b>			
13.1	Work Effectively in a Team Involved in Activities for Ammunition	N/A	COGESA13.1
LA1	Manage your own Resources	N/A	CFAMLA1
LA2	Manage your own Resources and Professional Development	N/A	CFAMLA2
13.4	Manage Continuous Improvement in Activities for Explosive Substances and Articles	N/A	COGESA13.4
LD5	Allocate and Check Work in your Team	N/A	CFAMLD5
LB5	Provide Leadership for your Team	N/A	CFAMLB5
LB6	Provide Leadership in your Area of Responsibility	N/A	CFAMLB6
IO3.13	Conduct an Assessment of Risks in the Workplace in Processing Industries Operations	02.10	COGPI03.13

<b>Explosive Sector Competences</b>			
<b>Code<sup>54</sup></b>	<b>Competencies</b>	<b>IATG<sup>55</sup></b>	<b>NOS ESA Reference<sup>56</sup></b>
SA13.9	Provide Technical or Safety Advice and/or Guidance to Others on Explosives	All	COGESA13.9
SA13.10	Make Presentations on Explosives Matters	N/A	COGESA13.10
SA13.11	Hand Over Ammunition	03.10 03.20	COGESA13.11
SA13.12	Pack or Re-Pack Ammunition	07.30	COGESA13.12
SA13.13	Unpack Ammunition	07.30	COGESA13.13
SA13.14	Manage Equipment in an Explosives Environment	05.50	COGESA13.14
SA13.15	Prepare and Care for Equipment in an Explosives Environment	05.50	COGESA13.15
SA13.16	Manage Explosives Safely	All	COGESA13.16
SA13.17	Certify as Free from Explosives (FFE)	07.20	COGESA13.17
SA13.18	Supervise Explosives Safety	All	COGESA13.18

## Annex L (normative)

### Competences – Force Explosives Safety Officer (FESO)

A Force Explosives Safety Officer, of an appropriate rank/grade, shall be designated in writing by the Force Commander, or the Operational Headquarters. The FESO shall be responsible for advising the Force Commander on all ammunition and explosives safety matters. The mandate of the FESO to implement explosive safety activities within the deployed force should be considered and designated by the Force Commander.

#### L.1 Force generation

An appropriately qualified and experienced officer<sup>59</sup> shall be appointed as the Force Explosive Safety officer. This officer shall have the following competencies:

- a) have a detailed technical knowledge and understanding of the full scope of IATG;
- a) be able to calculate the appropriate Quantity Distances / Temporary Distances (QD/TD) to be applied from Potential Explosion Sites (PES) to other PES and to Exposed Sites (ES);
- b) be able to plan an Ammunition/Explosives Storage Area in accordance with IATG 04.10: *Temporary storage*. (For example the number of PES required, barricade requirements, appropriate QD/TD);
- c) be able to organize a field or temporary ammunition depot based on economical storage principles and procedures;
- d) have a detailed knowledge and understanding of lightning protection system and fire prevention requirements;
- e) be able to immediately visually identify explosive safety standard shortcomings during a survey or inspection of ammunition storage and maintenance operations;
- f) be knowledgeable of accident reporting procedures and capable of investigating ammunition accidents from first principles of ammunition technology and explosive engineering;
- g) be able to determine the risk and consequences of deviations from the regulations and communicate with the Operational Commander the mitigating efforts necessary to reduce or eliminate hazards. This will inevitably include the requirement to develop Explosion Consequence Analysis (ECA) reports based on first principles of ammunition technology and explosive engineering;
- h) have a detailed knowledge of appropriate mitigation and protective construction design techniques and methodologies;
- i) be able to prepare explosives limits licences based on QD, TD and ECA.

During Disarmament, Demobilization and Reintegration (DDR) operations the FESO should also be capable of advising the Force Commander on;

- j) Explosive Ordnance Disposal (Conventional Munition Disposal) matters;
- k) the safe collection of ammunition and explosives from the civilian population in accordance with MOSAIC 05.40 *Collection*;
- l) the safe destruction of weapons recovered from the civilian population in accordance with MOSAIC 05.50 *Destruction: Weapons*; and

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<sup>59</sup> The range of competencies required of this appointment means that it is unlikely to be effectively filled by an officer who is not Ammunition Technical Officer (ATO) qualified (or national equivalent).

- m) the safe destruction of ammunition and explosives recovered from the civilian population in accordance with IATG 10.10 *Demilitarization and destruction*.

Should a FESO not be identified with the skills necessary to advise on k) to n) above, then an appropriately qualified individual should also be appointed to the Force Headquarters.

It is recommended that during the planning process, provision should be made to involve appropriately qualified personnel in the storage, management and safe logistic disposal of ammunition and explosives. This should, ideally, be the FESO designated for the Force.

## Annex M (normative) Accepted retrospective qualifications

Qualification <sup>60</sup>	Level	IATG Category	Awarding Nations
Ammunition Fitting (SAQA 90652)	3	Ammunition Supervisor	South Africa <sup>61</sup>
Ammunition Officer (2340)	5	Ammunition Inspector	USA <sup>62</sup>
Ammunition Specialist (89B)	3	Ammunition Supervisor	USA <sup>66</sup>
Ammunition Supplier	1 - 2	Ammunition Handler	Australia <sup>63</sup>
Ammunition Technical Officer (ATO)	5	Ammunition Inspector	Australia <sup>67</sup> , Bangladesh, Barbados <sup>64</sup> , Belgium, Belize <sup>68</sup> , Canada <sup>68</sup> , Germany <sup>66</sup> , India, Ireland <sup>67</sup> , Jamaica <sup>68</sup> , Kenya <sup>68</sup> , Kuwait <sup>68</sup> , Luxembourg, Malaysia <sup>68</sup> , Netherlands, New Zealand <sup>67 68</sup> , Nigeria <sup>68</sup> , Pakistan, Saudi Arabia <sup>68</sup> , Singapore <sup>68</sup> , Trinidad and Tobago <sup>68</sup> and UK <sup>68 68</sup>
Ammunition Technician (AT 1)	5	Ammunition Inspector	
Ammunition Technician (AT 2)	2	Ammunition Processor	
Ammunition Technician (2311)	2	Ammunition Processor	USA <sup>66</sup>
Ammunition Warrant Officer (890A)	4	Ammunition Manager	USA <sup>66</sup>
Explosives Safety Officer (Ammo-74)	1 - 2	Introduction Course	USA <sup>66</sup>

<sup>60</sup> The code in brackets refers to the Military Occupational Specialist code or equivalent.

<sup>61</sup> Held at South African Army School of Ordnance.

<sup>62</sup> Held at Defense Ammunition Center, McAlester, USA.

<sup>63</sup> Held at Army Logistic Training Centre, Bandiana, Victoria, Australia.

<sup>64</sup> Attended UK Army School of Ammunition (<2004) or UK DEMSS (>2014).

<sup>65</sup> Held at Canadian Forces Logistics Training Centre in Borden, Ontario, Canada or attended UK DEMS.

<sup>66</sup> Held at Land Systems School of Technology and Army Technical College, Aachen, Germany.

<sup>67</sup> Held at Irish Defence Force School of Ordnance.

<sup>68</sup> Held at Defence Explosives, Munitions and Search School (DEMSS), Kineton, UK. ATO also attends the Defence Academy for specialist training.

Qualification <sup>60</sup>	Level	IATG Category	Awarding Nations
Explosives Safety Specialist	5	Ammunition Inspector	USA <sup>69</sup>
International Ammunition Technician	3	Ammunition Inspector	Commercial company ISSEE <sup>70</sup>
Material Maintenance and Munitions Management Officer (91A)	5	Ammunition Inspector	USA <sup>66</sup>
Technical Munitions Officer	5	Ammunition Inspector	South Africa <sup>65</sup>

Table 2: Retrospective qualification for competence

<sup>69</sup> Training will be dependent on which service the individual is in support of.

<sup>70</sup> [www.issee.co.uk](http://www.issee.co.uk). This is the 24 week International Ammunition technician Course.

## Amendment record

### Management of IATG amendments

The IATG are subject to formal review on a five-yearly basis. This does not preclude amendments being made within these five-year periods for reasons of operational safety, efficacy and efficiency or for editorial purposes.

As amendments are made to this IATG module they will be given a number, and the date and general details of the amendment will be shown in the table below. The amendment will also be shown on the cover page of the IATG by the inclusion of the amendment number and date.

As the formal reviews of each the IATG module is completed, new editions will be issued. Amendments will be incorporated into the new edition and the amendment record table cleared. Recording of amendments will then start again until a further review is carried out.

The most recently amended, and thus extant, IATG module is posted on [www.un.org/disarmament/ammunition](http://www.un.org/disarmament/ammunition)

Number	Date	Amendment Details
0	01 Feb 15	Release of Edition 2 of IATG.
1	31 March 21	Release of Edition 3 of IATG.