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Emergency Protocol (EP2)

Transport of small quantities of ammunition and explosives for final destruction

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Warning

This document is an Emergency Protocol solely designed to reduce risk in those emergency situations where resources do not yet allow for the requirements or recommendations of the appropriate international legislation, International Mine Action Standards (IMAS), International Ammunition Technical Guidelines (IATG) or the Modular Small-arms-control Implementation Compendium (MOSIAC) to be met.

About

The South-Eastern and Eastern Europe Clearinghouse for the Control of Small Arms and Light Weapons (SEESAC) is a joint initiative of the United Nations Development Programme (UNDP) and the Regional Cooperation Council (RCC) aimed at strengthening national and regional capacities to control and reduce the proliferation and misuse of small arms and light weapons, thus contributing to enhanced stability, security, and development in South Eastern and Eastern Europe.

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Introduction

During routine police operations, weapons amnesties and voluntary collection programmes small quantities of ammunition and explosives are often recovered to police stations for secure storage. SEESAC EP.1 provides guidance on the appropriate action to be considered under such circumstances.

Rather than refuse to accept ammunition and explosives at police stations, it is overall a lower risk to the general public that they then be accepted for storage within police stations or security force bases on a short term and temporary basis. The acceptance of this risk will require that the recovered ammunition and explosives will need to be subsequently moved to a safe destruction site. This may require movement via a central storage location for consolidation prior to destruction.

This emergency protocol is as simple as reasonably practicable and is designed to be applied using the minimum of resources, whilst reducing the level of inherent risk. Basic safety precautions are recommended to reduce the risk of undesirable explosive events during the transport of ammunition and explosives, but, although unlikely, fatalities and injuries to individuals in local civilian communities may still occur, and that risk must be formally accepted by the appropriate authority.

The content is advisory and as it refers to, and relates to, extant international agreements and national legislation the approval of the appropriate transport department of the Ministry of Interior should be obtained before the procedures are adopted.

Transport of small quantities of ammunition and explosives for final destruction

1 Scope

This emergency protocol provides guidance for the transportation of small quantities of surrendered or recovered abandoned explosive ordnance (AXO), ammunition and explosives initially recovered to police stations or security force bases from the temporary storage location to the point of final destruction, possibly via a the central storage location for stock consolidation.

Experience has shown that ammunition such as, but not exclusively limited to, high explosive hand grenades, rocket propelled grenades, anti-personnel and anti-tank mines, anti-tank rockets, high explosive charges and detonators are often surrendered by the public to local police stations or recovered during police seizures.

The protocol has been designed using the same layout and ISO language of IMAS and IATG for ease of reference.

2 References

A list of informative references is given in Annex A. These references are important documents that lay down standards and guidelines that should be applied to unit storage of ammunition and explosives when the appropriate resources are available.

3 Terms and definitions

A list of terms and definitions used in this emergency protocol is given in Annex B.

In this emergency protocol, the words 'shall', 'should' and 'may' are used to indicate the intended degree of compliance. This use is consistent with the language used in ISO standards and guidelines.

- a) 'shall' is used to indicate requirements, methods or specifications that are to be applied in order to conform to the emergency protocol.
- b) 'should' is used to indicate the preferred requirements, methods, or specifications.
- c) 'may' is used to indicate a possible method or course of action.

4 International legislation (ADR)

The *Agreement concerning the International Carriage of Dangerous Goods by Road*,¹ which entered into force on 29 January 1968 provides the basis for appropriate legislation and regulations for the carriage of dangerous goods by road. Ammunition and explosives are considered to fall under the Class 1 dangerous goods category. Table 1 summarises the status of the countries and entities in South-Eastern Europe regarding ADR.

Country / Entity	Status	Date
Albania	Acceded	26 January 2005
Bosnia and Herzegovina	Succession ²	1 September 1993

¹ <https://unece.org/transport/standards/transport/dangerous-goods/adr-2023-agreement-concerning-international-carriage>. 1 January 2023.

² All "successions" are from the former Yugoslavia, which acceded to ADR on 28 May 1971.

Country / Entity	Status	Date
Bulgaria	Acceded	12 May 1995
Croatia	Succession	23 November 1992
North Macedonia	Succession	18 April 1997
Moldova	Non-Signatory	
Montenegro	Succession	23 October 2006
Romania	Acceded	8 June 1994
Serbia	Succession	12 March 2001
Kosovo ³	Non-Signatory	

Table 1: Summary of ADR signatory status

Article 1 (c) of the agreement states that the term 'international transport' means "*any transport operation performed on the territory of at least two Contracting Parties....*". It does not apply to internal transportation activities within the borders of States.

5 National legislation

The following national legislation regarding ADR in the SEE Region has been identified as shown in Table 2. Full contact details for the appropriate national enforcement body for ADR may be found at <https://www.itf-oecd.org/national-control-bodies>. These bodies should be consulted by the organizations requiring the emergency transport of ammunition and explosives regarding their implementation of the guidelines provided by this emergency protocol. In some States the laws allow for the regulation of transport of dangerous goods by the Ministries of Interior and/or Defence.⁴

Country / Entity	Law	Date
Albania	Law No 118 on the Transport of Dangerous Goods. ⁵	13 December 2012
Bosnia and Herzegovina	At entity level only. No national legislation from Council of Ministers.	Official Gazette of Republic of Srpska No 15/16.
Bulgaria	Road Transport Law.	2003
Croatia	Regulation on the method of transport of dangerous goods by road. ⁶	24 April 2006
North Macedonia	Law on the Transport of Dangerous Goods in Road...Traffic.	Amended in Official Gazette 288/21
Moldova	Decision No.143. Regulation on the internal transport of dangerous goods. Decision No.589. Regulation on road transport of dangerous goods.	18 February 2016 24 July 2017
Montenegro	Law on Transportation of Dangerous Substances. ⁷	23 November 2008

³ For the United Nations Development Programme, references to Kosovo shall be understood to be in the context of Security Council resolution 1244 (1999). For the European Union, this designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

⁴ Article 4 of the Law on Transport of Dangerous Goods (2017) in Serbia states that: 1) the Minister for Internal Affairs "*regulates the transport of dangerous goods, which is carried out by means of transport of the ministry responsible for internal affairs, in a special regulation*".

⁵ <https://qbz.gov.al/eli/ligj/2012/12/12/118/8e56b40d-bfe5-4b78-96ea-a5f447af3b50;q=118%202012>. AL text only.

⁶ <https://faolex.fao.org/docs/pdf/cro138553.pdf>. HR text only.

Country / Entity	Law	Date
Romania	Law No. 122/2002 Road Transport of Dangerous Goods.	2002
Serbia	Law on Transport of Dangerous Goods ^{8 9}	1 January 2017
Kosovo	Law No.4/L-183 on Land Transport of Dangerous Goods. ¹⁰	26 April 2013

Table 2: Summary of ADR national legislation

6 Exemptions¹¹

National laws on Transport of Dangerous Goods often allow for certain exemptions from the requirements of ADR regarding the transport of small quantities of ammunition and explosives, although this does not normally include exemptions from ADR Sections 1.8 and 1.10 (see 6.1 and 6.2). A permit from the appropriate Ministry is normally required for the civilian movement of such dangerous goods.

6.1 Section 1.8 - Safety requirements

In regard to the transport of small quantities of explosives, for a “one time move” to the final point of destruction, possibly after consolidation at a central storage location, ADR may be interpreted as requiring that the following safety provisions shall be implemented:

- a) the maximum explosive quantity shall be less than 50kg NEC per vehicle, and this is unlimited if the explosives are categorised as hazard division 1.4S (small arms ammunition) (ADR 1.1.3.6.2);
- b) a Dangerous Goods Safety Advisor (DGSA) should be trained and appointed within the headquarters of the organization (the requirements are in ADR 1.8.3). It is not regarded as necessary for there to be a DGSA at each police station or security base; and
- c) any serious accident or incident shall be reported to the appropriate authority (ADR 1.8.5).

6.2 Section 1.10 - Security provisions¹²

Under ADR Table 1.10.5 ammunition and explosives are regarded as “high consequence dangerous goods”.

In regard to the transport of small quantities of ammunition and explosives, for the “one time move” to the final point of destruction, ADR may be interpreted as requiring that the following security provisions shall be implemented:

- a) the vehicle crew shall carry an official means of identification (ADR 1.10.1.4);
- b) the vehicle crew shall have received appropriate, and recorded, security awareness training (ADR 1.10.2);

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http://www.vertic.org/media/National%20Legislation/Montenegro/ME_Law_transportation_dangerous_substances.pdf.

⁸ <https://faolex.fao.org/docs/pdf/srb180035.pdf>. RS text only.

⁹ "Official Gazette of the SFRY - International Agreements", no. 59/72 and 8/77, "Official Gazette of the RS - International Agreements", no. 2/10 and 14/13), with subsequent amendments.

¹⁰ <https://gzk.rks-gov.net/ActDetail.aspx?ActID=8658&langid=2>.

¹¹ In the EN translation of the Law on Transport of Dangerous Goods the term “deviation” is used, which in effect is same as exemption.

¹² ADR Annex A, Part 1, Chapter 1.10.

- c) a security plan shall be in place (ADR 1.10.3.2) (see Annex C); and
- d) arrangements shall be in place to prevent the theft of the vehicle (ADR 1.10.3.3).

7 Packaging issues

Ammunition or explosives are categorised dependent on the hazard class (1 for explosives), hazard type (1 to 6) and compatibility with other explosives (compatibility groups A to S). This provides a unique hazard classification code (HCC) for each ammunition type (for example 1.1D for a high explosive artillery shell or 1.4S for 9mm ammunition).

A UN serial number for transport (for example UN 0012 for small arms ammunition) is then allocated in accordance with the UN Recommendations on the Transport of Dangerous Goods - Model Regulations (the "Orange Book").¹³ These are based on tests undertaken in accordance with the UN Manual Tests and Criteria.¹⁴ These tests are conducted on ammunition and explosives that are contained within its primary packaging from the manufacturer.

ADR assumes that the ammunition and explosives is still contained within its primary packaging. This will rarely be the case for ammunition and explosives that are surrendered or recovered to police stations or security force bases. Such ammunition and explosives are almost always surrendered as an item with no packaging. In such cases the 'Orange Book'¹⁵ states that "*competent authorities retain the right by mutual agreement to approve transport of explosive substances and articles for special purposes under special conditions. Therefore, entries have been included in the Dangerous Goods List for "Substances, explosive, not otherwise specified" and "Articles, explosive, not otherwise specified". It is intended that these entries shall be used only when no other method of operation is possible*".

National authorities may arrange for one of the following UN Serial Numbers to be allocated to ammunition and explosives not in their primary packaging. It is recommended that such allocations shall be made by ammunition qualified staff or explosive ordnance disposal officers, and examples are at Annex D:

- a) UN 0461 for explosive components (i.e. detonators);
- b) UN 0462 to 0472 for explosive articles (i.e. ammunition); or
- c) UN 0473 to 0481 for explosive substances (i.e. explosives).

As the ammunition quantities will be small but of numerous types, to cover worse case scenarios from a safety perspective, and to allow for ease of categorization, it is recommended that all ammunition and explosives, other than detonators and small arms ammunition, shall be transported under UN Serial Number 0462. Detonators should be transported under UN Serial Number 0461 and small arms ammunition under UN Serial Number 0481. This will ensure the highest safety levels while reducing the requirements for lengthy classification decision-making by technical staff.

8 Consolidated requirements

Table 3 summarises the recommended consolidated requirements for the emergency transport of ammunition and explosives from a temporary storage location to the final point of destruction.

¹³ <https://unece.org/transport/dangerous-goods/un-model-regulations-rev-23>. Revision 23, 10 August 2023.

¹⁴ <https://unece.org/about-manual-tests-and-criteria>. Revision 8, 27 November 2023.

¹⁵ Annex A, Volume 1, Part 2, Chapter 2.1, NOTE 1.

Generic Area	Activity		ADR #
	Organization	Unit	
Accounting		Ensure a load manifest is prepared for each move, which shall include the UN Serial Number and details of ammunition and explosives.	
Fire Response		Each vehicle to carry 2 x 2kg dry powder fire extinguishers for immediate firefighting.	8.1.4.1
Fire Response		Vehicle crew shall only fight a developing fire that has not reached the cargo. The crew shall NOT fight a fire in the cargo.	
Fire Response		The load manifest indicating the UN Serial Number is to be immediately handed to the senior fire officer on arrival.	
Packaging		Ensure packaging is labelled with UN Serial Number and a UN Hazard Division label. The vehicle need not be labelled with a UN Hazard Placard (see later under Security).	
Packaging		Ammunition to be packaged in a sand filled robust container to negate movement within the container during transport.	
Packaging		The containers to be secured within the vehicle to negate movement during transport.	
Safety	Appoint a Dangerous Goods Safety Advisor.		1.8.3
Safety	Categorize recovered ammunition and explosives as either UN 0461, 0462 or 0481.		2.1.2.1
Safety		Ensure that a "safe to move" certificate is obtained from ammunition technical staff or an explosive ordnance disposal team.	
Safety		Ensure the appropriate UN Serial Number is clearly indicated on the load manifest. This is to be provided to the senior fire officer in event of accident involving fire.	
Safety		Maximum load of 50kg net explosive content in each vehicle.	1.1.3.6.2

Generic Area	Activity		ADR #
	Organization	Unit	
Safety		Vehicle movement should be done at night when less general public are on the streets. <i>(Risk reduction measure).</i>	
Safety		Vehicles should not stop within 300m of inhabited areas for crew change or rest. <i>(Risk reduction measure).</i>	
Safety		Ensure vehicle crews receive a safety brief before movement.	1.3.2.1 1.3.2.3
Safety		The vehicle crew shall be prohibited from smoking within 30m of the vehicle or displaying fire or naked lights.	8.3.5
Safety		Report any accidents or incidents to the appropriate authority.	1.8.5
Safety		Serviceable diesel fuelled vehicles should be used as a preference.	
Security		The vehicle crews shall carry an official means of identification.	1.10.1.4
	Advise on appropriate security awareness training.	Ensure vehicle crews shall have received security awareness training, and that such training is recorded.	1.10.2
	Advise on generic security plan.	Develop a security plan for each move. This should include requirements as to the need for the crew to be armed.	1.10.3.3
		A separate escort vehicle should accompany a single vehicle move of ammunition and explosives. This is not required if there are two cargo vehicles or more.	
		Ensure effective theft prevention measures by ordering vehicle crew to 1) never leave vehicle unattended; 2) two person crews for each vehicle; and 3) ammunition and explosives are locked in the trunk of the vehicle.	1.10.3.3
		Security requirements may mean that the normal UN Hazard Placard should not be displayed.	

Table 3: Summary of transport requirements

9 Risk management

It is emphasised that this emergency protocol cannot be inherently safe due to the many variables when transporting ammunition of unknown provenance. A generic risk assessment has been compiled in accordance with the principles in IATG 02:10 *Introduction to risk management principles and processes*,¹⁶ and is at Annex E.

The aim of risk evaluation is to compare the estimated effects, in terms of human fatalities and injuries, financial costs and political impact of an explosive event against what is tolerable in society. When the risk is assessed as tolerable then no remedial action should be required, although it should be considered if that risk is not As Low as Reasonably Practicable (ALARP).

In this case the risk has been assessed as 'Very Low' during the risk evaluation, and that risk is considered as 'tolerable'. This risk shall be formally communicated to the appropriate authority; 1) Ministry of Interior; or 2) Chief of Police, who shall then formally accept the residual risk in writing.¹⁷

10 Responsibilities and obligations

10.1 Ministry of Interior / Chief of Police

The Ministry of Interior or Chief of Police, as appropriate, shall:

- a) formally appoint and ensure that a Dangerous Goods Safety Advisor is appropriately trained;
- b) formally sign off on the residual risk¹⁸ for the "one time move" transport of ammunition and explosives from police station to the final point of destruction; and
- c) To ensure that the appropriate ammunition and explosive ordnance disposal personnel are trained and made available for the routine and regular clearance of ammunition and explosives held under emergency storage conditions.

10.2 Police station or small unit

The Police station or small unit shall:

- a) ensure that this emergency protocol is strictly applied; and
- b) ensure that appropriate ministry transport support is regularly and routinely requested to transport all stocks of AXO, ammunition and explosives that are held in emergency storage at their location to the final point of destruction.

¹⁶ Clauses 6.3 and 7.1, and Annex D.

¹⁷ See Clause 11 of IATG 02:10 *Introduction to risk management principles and processes*. This states in effect that then the residual risk should be formally accepted in writing by the authority responsible for the allocation of resources. Provided measures to achieve tolerable risk have been identified, then the residual risk is now an issue of resource allocation and not one of technical knowledge.

¹⁸ Defined as: *the remaining potential for harm to persons, property or the environment following all possible efforts to reduce predictable hazards*. [ISO Guide 51:1999].

Annex A

(Informative)

Informative references

The following informative documents contain provisions, which, through reference in this text, may constitute provisions of this part of the standard. 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 protocol are encouraged to investigate the possibility of applying the most recent editions of the informative documents indicated below as soon as is reasonably practicable. For undated references, the latest edition of the informative document referred to applies:

- a) IMAS 10.50 *Storage, transportation, and handling of explosives*; and
- b) IATG 02.10 *Introduction to risk management principles and processes*.

The latest version/edition of these references should be used, which are available at:

- c) IMAS. <https://www.mineactionstandards.org/standards/>;
- d) IATG. <https://unsafeguard.org/un-safeguard/guide-lines>; and
- e) MOSAIC. <https://disarmament.unoda.org/convarms/mosaic/>.

Annex B

(Informative)

Terms and definitions

The following terms and definitions are those contained within IATG 01:40 *Glossary of terms, definitions, and abbreviations*. They have been included for ease of reference.

B.1.1

abandoned explosive ordnance (AXO)

explosive ordnance that has not been used during an armed conflict, that has been left behind or dumped by a party to an armed conflict, and which is no longer under control of the party that left it behind or dumped it. Abandoned explosive ordnance may or may not have been primed, fuzed, armed, or otherwise prepared for use.

B.1.2

accident

an undesired event, which results in **harm**.

B.1.3

ammunition

a complete device, (e.g. missile, shell, mine, demolition store etc.) charged with explosives, propellants, pyrotechnics, initiating composition or nuclear, biological, or chemical material for use in connection with offence, or defence, or training, or non-operational purposes, including those parts of weapons systems containing explosives. (c.f. **munition**).

B.1.4

ammunition container

an approved box, cylinder, tin plate liner or receptacle that is designed to contain **explosive articles** or explosives substances. It normally forms part of an ammunition container assembly.

B.1.5

ammunition store (unit)

an authorised building containing **ammunition** on small unit account.

B.1.6

explosive

solid or liquid substance or mixture of substances which, by intrinsic chemical reaction can produce an **explosion**.

a substance or mixture of substances, which, under external influences, is capable of rapidly releasing energy in the form of gases and heat.

B.1.7

explosive ordnance disposal (EOD)

the detection, identification, evaluation, render safe, recovery and final disposal of unexploded **explosive ordnance**.

Note: EOD may also include the rendering safe and/or disposal of such explosive ordnance which have become hazardous by damage or deterioration, when the disposal of such explosive ordnance is beyond the capabilities of those personnel normally assigned the responsibility for routine disposal. The level of EOD response is dictated by the condition of the ammunition, its level of deterioration and the way that the local community handles it.

B.1.8

harm

physical injury or damage to the **health** of people, or damage to property or the environment.

B.1.9**hazard**

potential source of **harm**.

B.1.10**propellant**

deflagrating **explosive** used for propulsion.

a substance that is used to move an object by applying a motive force. This may or may not involve some form of chemical reaction. It may be a gas, liquid, or, before the chemical reaction, a solid. Chemical propellants are most usually used to project **ammunition warheads**.

a substance on its own or in a mixture with other substances that can be used for the chemical generation of gases at the controlled rates required for propulsive purposes.

Note: Propellants can also be used as components of gas generators or other items.

B.1.11**residual risk**

the remaining potential for **harm** to persons, property or the environment following all possible efforts to reduce predictable **hazards**.

B.1.12**risk**

combination of the probability of occurrence of **harm** and the severity of that harm.

B.1.13**risk analysis**

systematic use of available information to identify **hazards** and to estimate the **risk**.

B.1.14**risk assessment**

the overall process comprising a **risk analysis** and a **risk evaluation**.

the objective evaluation of **risk** in a way assumptions and uncertainties are clearly considered and presented.

the determination of the quantitative or qualitative value of **risk** related to a concrete situation and a recognized threat.

B.1.15**risk management**

the complete risk-based decision-making process.

B.1.16**risk reduction**

actions taken to lessen the probability, negative consequences, or both, associated with a particular **risk**.

B.1.17**safe**

the absence of **risk**. Normally the term **tolerable risk** is more appropriate and accurate.

B.1.18**'safe to move'**

a technical assessment, by an appropriately qualified technician or technical officer, of the physical condition and stability of **ammunition** and **explosives** prior to any proposed move.

Note: Should the ammunition and explosives fail a 'Safe to Move' inspection, then they must be destroyed in situ, or as close as is practically possible, by a qualified EOD team acting under the advice and control of the qualified technician or technical officer who conducted the initial Safe to Move inspection.

B.1.19

safety

the reduction of **risk** to a tolerable level.

degree of freedom from unacceptable **risk**.

B.1.20

small unit

any government organization, at the tactical level, where individuals are involved in the storage, handling and use of ammunition and explosives but are not directly managed by ammunition qualified personnel.

B.1.21

residual risk

the remaining potential for **harm** to persons, property or the environment following all possible efforts to reduce predictable **hazards**. [ISO Guide 51:1999]

B.1.22

tolerable risk

risk which is accepted in a given context based on current values of society [ISO Guide 51:1999(E)]

Annex C

(Normative)

Security plan in accordance with ADR

Annex A, Part 1, Chapter 10 of ADR states that the security plan shall consider the following elements:

- a) Specific allocation of responsibilities for security to competent and qualified persons with appropriate authority to carry out their responsibilities;
- b) Records of dangerous goods or types of dangerous goods concerned;
- c) Review of current operations and assessment of security risks, including any stops necessary to the transport operation, the keeping of dangerous goods in the vehicle before, during and after the journey....;
- d) Clear statement of measures that are to be taken to reduce security risks, commensurate with the responsibilities and duties of the participant, including:
 - training;
 - security policies (e.g. response to higher threat conditions, new employee/employment verification, etc.);
 - operating practices (e.g. choice/use of routes where known, access to dangerous goods in intermediate temporary storage (as defined in (c)), proximity to vulnerable infrastructure etc.);
 - equipment and resources that are to be used to reduce security risks;
- e) Effective and up to date procedures for reporting and dealing with security threats, breaches of security or security incidents;
- f) Procedures for the evaluation and testing of security plans and procedures for periodic review and update of the plans;
- g) Measures to ensure the physical security of transport information contained in the security plan; and
- h) Measures to ensure that the distribution of information relating to the transport operation contained in the security plan is limited to those who need to have it. Such measures shall not preclude the provision of information required elsewhere in ADR.

Annex D (Informative) Informative references

The following UN Serial Numbers are provided as guidance to ammunition technical staff pr explosive ordnance disposal teams for unpackaged ammunition and explosives prior to a “one time move” for final destruction.

It is recommended though that any detonators or fuzes be classified as UN 0461, small arms ammunition as UN 0481 and all other ammunition as UN 0462. This means that the UN serial number is allocated on a worse case basis and

UN #	HCC	UN Nomenclature	Examples
0461	1.1B	explosive components (not otherwise specified)	<ul style="list-style-type: none"> ▪ Blasting caps ▪ Detonators
0462	1.1C	articles, explosive (not otherwise specified)	<ul style="list-style-type: none"> ▪ High explosive artillery shells
0463	1.1D		<ul style="list-style-type: none"> ▪ High explosive artillery shells (unfuzed)
0464	1.1E		<ul style="list-style-type: none"> ▪ High explosive rockets (fragmentation)
0465	1.1F		<ul style="list-style-type: none"> ▪
0466	1.2C		<ul style="list-style-type: none"> ▪
0467	1.2D		<ul style="list-style-type: none"> ▪
0468	1.2E		<ul style="list-style-type: none"> ▪ High explosive incendiary cannon round
0469	1.2F		<ul style="list-style-type: none"> ▪
0470	1.3C		<ul style="list-style-type: none"> ▪ Propelling charges
0471	1.4E		<ul style="list-style-type: none"> ▪
0472	1.4F		<ul style="list-style-type: none"> ▪
0473	1.1A	substances explosive (not otherwise specified)	<ul style="list-style-type: none"> ▪ Primary explosive (e.g. lead styphnate)
0474	1.1C		<ul style="list-style-type: none"> ▪ Propellant in bulk
0475	1.1D		<ul style="list-style-type: none"> ▪ High explosive in bulk
0476	1.1G		<ul style="list-style-type: none"> ▪ Smoke ammunition
0477	1.3C		<ul style="list-style-type: none"> ▪ Propellant
0478	1.3G		<ul style="list-style-type: none"> ▪ Illuminating shell
0479	1.4C		<ul style="list-style-type: none"> ▪ Tracer round
0480	1.4D		<ul style="list-style-type: none"> ▪
0481	1.4S		<ul style="list-style-type: none"> ▪ Small arms ammunition
0485	1.4G		<ul style="list-style-type: none"> ▪ Armour piercing incendiary round

Annex E (informative) Qualitative risk assessment

SECTION A: GENERAL RISK ASSESSMENT SUMMARY SHEET

Complete this sheet once Sections B to D have been used to conduct the Risk Assessment. This sheet then acts as a front-page summary and review record.

ASSESSMENT NO:	SEESAC EP.2	TASK LOCATION:	Various	DATE:	1 August 2024
TASK DESCRIPTION:	Transport of small quantities of ammunition and explosives for final destruction				

# ¹⁹	RESIDUAL RISKS IDENTIFIED	ACTION REQUIRED TO RECTIFY (ADDITIONAL TO CURRENT CONTROL MEASURES)
1	Manual Handling	<ul style="list-style-type: none"> ▪ Implement measures listed at Paragraph 8 of SEESAC EP.2 (Consolidated Requirements).
2	Transport of Dangerous Goods	
3	Secondary Explosives	
4	Propellants	
5	Pyrotechnics	
6	Blast Wave. Injuries to individuals from fragmentation in the event of an accident leading to initiation of ammunition during transport.	
7	Fragmentation. Injuries to individuals from fragmentation in the event of an accident leading to initiation of ammunition during transport.	

¹⁹ From Section C.

SECTION B: GENERAL RISK ASSESSMENT SUMMARY SHEET

Detail the hazards identified here in Section C of the assessment.

HAZARDS	MECHANICAL		ELECTRICAL		ACCESS AND ENVIRONMENT		HANDLING LIFTING AND TRANSPORT		EXPLOSIVES AND DANGEROUS SUBSTANCES		NOISE AND BLAST		RADIATION AND ENVIRONMENT	
SUB HAZARDS	Abrasion		Static		Slips, Trips etc		Manual Handling	1	Primary		Launch		RF	
	Cutting		Piezo-Electric		Falling Objects etc		Mechanical Equipment		Secondary		Impact		Radar	
	Shearing		Spark Ignition		Height		Lifting Tackle		Propellants		Static Initiation		Ionising	
	Stabbing		Connections		Trenching		Heavy Objects		Pyrotechnics		Blast Wave	3	Non-Ionising	
	Impact		Fire		Confined Space		Transport Explosives		WP		Fragmentation	4	Laser CI 1	
	Crushing				Exposed Areas		Transport Dangerous Goods	2	Chemical		Shock Transfer		Laser CI 2	
	Pressure System				Noise				Lachrymatory				Laser CI 3A	
	Machine Tools				Vibration				Toxic				Laser CI 3B	
	Cavitation				Humidity				Corrosive				Laser CI4	
	Grit				Temperature				Irritant					
					Weather				Paints and Solvents					
									Dusts					
								Fumes						

Now use Section C to expand on the Hazards identified, evaluate existing protective measures and "Rate" the Risk.

SECTION C: GENERAL RISK ASSESSMENT SUMMARY SHEET

Record the hazards identified in Section B in more detail and evaluate current control measures, if any. Then use Section D to assess the risk and enter here.

ASSESSMENT NO:	SEESAC EP.2	TASK LOCATION:	Various	DATE:	1 August 2024
TASK DESCRIPTION:	Transport of small quantities of ammunition and explosives for final destruction				

# ²⁰	FURTHER DETAILS OF HAZARD FROM SECTION B	CURRENT CONTROL MEASURES	RISK RATE	RESIDUAL RISK
1	Manual Handling. Accidental initiation of ammunition due to handling.	<ul style="list-style-type: none"> Keep handling to a minimum. 1) on receipt from member of public; 2) when placing in temporary storage area; and 3) when loading and unloading to transport. 	0.8	Acceptable
2	Transport of Dangerous Goods. Accidents involving fire to vehicles or serious crashes.	<ul style="list-style-type: none"> Paragraph 8 of SEESAC EP.2 (Consolidated Requirements). 	7.5	Low
3	Blast Wave. Injuries to individuals from fragmentation in the event of an accident leading to initiation of ammunition during transport.	<ul style="list-style-type: none"> Paragraph 8 of SEESAC EP.2 (Consolidated Requirements). 	3.0	Very Low
4	Fragmentation. Injuries to individuals from fragmentation in the event of an accident leading to initiation of ammunition during transport.	<ul style="list-style-type: none"> Paragraph 8 of SEESAC EP.2 (Consolidated Requirements). 	3.0	Very Low
5	Consolidated Mean		3.6	Very Low

Now complete the Risk Assessment Summary Sheet, Section A, transferring the Residual Risks and identifying appropriate corrective action.

²⁰ From Section B.

SECTION D: GENERAL RISK ASSESSMENT - RISK RATING TABLES

Use this section to identify Hazards and Sub-hazards. Detail the hazards identified here in Section C of the assessment.

Use this Section to assess Risks and calculate a Rating for each Risk. The ratings should then be annotated as applicable in Section C.

ASSESSMENT NO:	SEESAC EP.1	TASK LOCATION:	Various	DATE:	1 December 2023
TASK DESCRIPTION:	Small unit emergency storage of ammunition				

HAZARD # FROM SECTION C	PROBABILITY OF EXPOSURE 'E'	FREQUENCY OF EXPOSURE 'F'	MAXIMUM LOSS 'L'	PERSONS AT RISK 'N'	RISK RATING E x F x L x N	SCORING TABLES							
						'E'		'F'		'L'		'N'	
1	2.0	0.1	4.0	1	0.8	Impossible	0.0	Infrequent	0.1	Fatality	15.0	1 - 2 Persons	1
2	1.0	0.1	15.0	2	7.5	Almost Impossible	0.1	Annually	0.2	Permanent Serious Injury	8.0	3 - 7 Persons	2
3	1.0	0.1	15.0	2	3.0			Monthly	1.0			8 - 15 Persons	4
4	1.0	0.1	15.0	2	3.0	Highly Unlikely	0.5	Weekly	1.5	Temporary Serious Injury	4.0	16 - 50 Persons	8
								Daily	2.5			> 50 Persons	12
						Unlikely	1.0	Hourly	4.0	Break major bone or major illness	2.0		
						Possible	2.0	Constantly	5.0				
						Even Chance	5.0						
						Probable	8.0			Lacerations or mild ill health	1.0		
						Very Likely	10.0						
						Certain	15.0			Scratch or Bruising	0.5		

RISK RATING	RISK	ACTION TIMETABLE	RISK RATING	RISK	ACTION TIMETABLE
0 - 0.9	Acceptable	Accept Risk, but keep under review	50 - 100	High	Action as soon as possible
1.0 - 4.9	Very Low	Consider action and set timetable for completion	100 - 200	Very High	Action immediately
5.0 - 9.9	Low	Consider action and set timetable for completion	200 - 300	Extreme	Consider stopping activity - Action immediately
10.0 - 49.9	Significant	Consider action and remedy as soon as possible	300 +	Unacceptable	Stop activity

Consider existing Control Measures when assessing these values.

Now complete the Summary Sheet at Section C, Section A and ensure the assessment is signed by the appropriate persons.