



# RMDS/G 05.45

4<sup>th</sup> Edition  
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## Reporting and investigation of weapons, ammunition and explosives accidents

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### **Warning**

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## Foreword

On 08 May 2003 the development of regional micro-disarmament<sup>1</sup> standards and guidelines was discussed during the RACVIAC sponsored seminar on '**SALW - A year after Implementation of the Stability Pact Plan**'. The consensus was that such standards and guidelines were desirable, and SEESAC agreed to develop a framework and then take responsibility for the future development of regional standards. It was agreed RMDS/G would be designed to support the work at the operational level, and would go further than the more generic 'best practice' documents currently available. After a wide-ranging discussion between stakeholders as to the status of RMDS/G it has been agreed that the term 'standards' will refer to the technical issues, whilst 'guidelines' will apply to 'programme' issues.

This RMDS/G<sup>2</sup> reflects the development of operational procedures, practices and norms, which have occurred over the past four years in the area of Small Arms and Light Weapons (SALW)<sup>3</sup> control. Best operational practices have been identified and reviewed from within the region and beyond, and included as appropriate within this RMDS/G.

SEESAC has a mandate under the Stability Pact Regional Implementation Plan to fulfil, among others, operational objectives of 1) sharing information on and enhancing co-operation in the establishment and implementation of SALW control and reduction programmes and approaches among regional actors; and 2) providing linkage and co-ordination with the other relevant regional initiatives. The development of RMDS/G is one means of fulfilling that mandate.

The work of preparing, reviewing and revising these standards and guidelines is conducted by SEESAC, with the support of international, governmental and non-governmental organisations and consultants. The latest version of each standard, together with background information on the development work, can be found at [www.seesac.org](http://www.seesac.org). RMDS/G will be reviewed at least every three years to reflect developing SALW control norms and practices, and to incorporate changes to international regulations and requirements. The latest review was conducted on 01 March 2006, which has reflected the development of the UN Integrated Disarmament, Demobilization and Reintegration Standards (IDDRS) [www.unddr.org](http://www.unddr.org), which include RMDS/G as a normative reference in the Disarmament and the SALW Control modules.

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<sup>1</sup> Defined as: 'The monitoring, collection, control and final disposal of small arms, related ammunition and explosives and light weapons of combatants and often also of the civilian population. It includes the development of responsible weapons and ammunition management programmes'. Often used interchangeably with SALW control in the past, but SALW Control is now the recognised terminology. The term Micro-Disarmament has only been used here to ensure consistency of the RMDS/G concept, rather than renaming the standards.

<sup>2</sup> The layout and format of RMDS/G are based on the highly successful International Mine Action Standards (IMAS). The cooperation of the UN Mine Action Service (UNMAS) is acknowledged by SEESAC during the development of RMDS/G.

<sup>3</sup> There is no agreed international definition of SALW. For the purposes of RMDS/G the following definition will apply: '**All lethal conventional munitions that can be carried by an individual combatant or a light vehicle, that also do not require a substantial logistic and maintenance capability**'

## Introduction

The need to reduce risk and to provide a safe working environment are fundamental principles of SALW Control operations. Risk reduction involves a combination of safe working practices and operating procedures, effective supervision and control, appropriate education and training, equipment of inherently safe design, and the provision of effective personal protective equipment and clothing. This provision of a safe working environment also includes the imperative to learn lessons and then adopt the necessary corrective measures after any accidents or incidents involving weapons, ammunition or explosives. Which means that accidents and incidents involving weapons, ammunition and explosives should be investigated in a clear, comprehensive and timely manner is an essential part of SALW Control programme management.

The aim of an investigation is to identify problems or opportunities to improve the safety and quality of the SALW Control process during the Collection, Destruction or Stockpile Management phases. The effective management and supervision of SALW Control programmes will reduce the likelihood of harm, but there will always be the potential for accidents or incidents to occur. There are legal and moral obligations on managers at all levels to ensure that the likelihood of harm is reduced to the lowest realistic levels. Effective reporting and the thorough investigation of accidents and incidents can play an essential part in meeting this objective.

The aim of this standard<sup>4</sup> is to provide specifications and guidance on the minimum requirement for the reporting and investigation of accidents and incidents involving weapons, ammunition and explosives.

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<sup>4</sup> This RMDS/G is based on IMAS 10.60.

# Reporting and investigation of weapons, ammunition and explosives accidents

## 1 Scope

This RMDS/G provides specifications and guidelines to cover the minimum requirements for the reporting and investigation of accidents or incidents involving weapons, ammunition or explosives during SALW Control interventions. It includes definitions for categorization of incidents, which should assist in drawing lessons that will benefit the wider SALW Control community.

This standard is applicable only for the reporting and investigation of incidents that occur at the relevant workplace.<sup>5</sup> It is not applicable to incidents away from the workplace (see terms, definitions and abbreviations below). Neither does it apply to investigations carried out to satisfy national or police requirements, though the relevant authority may choose to adopt elements as appropriate.

## 2 References

A list of normative references is given in Annex A. Normative references are important documents to which reference is made in this standard, and which form part of the provisions of this standard.

## 3 Terms and definitions

A list of terms and definitions used in this standard is given in Annex B. A complete glossary of all the terms and definitions used in the RMDS/G series of standards is given in RMDS/G 02.10.

In the RMDS/G series of standards, 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 adopted in order to satisfy the standard in full;
- b) 'should' is used to indicate the preferred requirements, methods or specifications; and
- c) 'may' is used to indicate a possible method or course of action.

The term '**explosives**' is used to refer to a substance or mixture of substances, which, under external influences, is capable of rapidly releasing energy in the form of gases and heat.

The term '**explosive materials**' is used to refer to components or ancillary items used by SALW Control organisations, which contain some explosives, or behave in an explosive manner, such as detonators, fuzes and primers.

The term '**ammunition**' (or munition<sup>6</sup>) is used to refer to a complete device charged with **explosives**, propellants, pyrotechnics, initiating composition, or nuclear, biological or chemical material for use in military operations, including **demolitions**. [AAP-6].

The term '**accident**' refers to an undesired event which results in harm.

The term '**incident**' refers to an event that gives rise to an accident or has the potential to lead to an accident.

<sup>5</sup> During SALW Control operations the workplace will be those areas where weapons, ammunition and explosives are collected, stored and/or destroyed.

<sup>6</sup> In common usage, 'munitions' (plural) can be military weapons, ammunition and equipment.

The term '**weapons incident**' refers to an incident at a SALW Control workplace involving a weapon.

The term '**ammunition incident**' refers to an incident at a SALW Control workplace involving conventional ammunition or explosives.

## **4 Incident reporting and investigation requirements**

### **4.1 Incidents**

#### **4.1.1 General requirements**

The following incidents shall be reported to the national SALW authority:

- a) an accident in which a weapon, ammunition or explosives harms an employee, visitor or member of the local population at a SALW Control workplace;
- b) an incident in which a weapon, ammunition or explosives damages equipment or property at a SALW Control workplace;
- c) where workers, visitors or the local population are exposed to intolerable risk that results from the application of documented standards or Standard Operating Procedures (SOPs), including the failure of equipment issued to employees;
- d) any unplanned detonation of ammunition or explosives at a SALW control worksite irrespective of the cause or outcome; and
- e) a non weapon, ammunition or explosives related accident on a SALW Control worksite that requires the urgent evacuation of a casualty to an advanced medical facility for treatment. These accidents may indicate a deficiency in procedures or equipment.

Authorities receiving reports of incidents that highlight inadequacies of equipment, standards or approved SOPs, or that indicate the presence of new types of hazard, shall disseminate a general warning to all organizations applying the same equipment, standard or SOP, or likely to meet the same new hazards. In the absence of a national SALW authority the SALW Control organizations themselves shall assume this responsibility.

**Note:** A national SALW authority may also feel it necessary to fully investigate the circumstances surrounding an ammunition incident in terms of evaluating the risk taking behaviour of a community. This will then enable them to better evaluate the value or relevance of a specific SALW Awareness (Risk Education) message or programme.

#### **4.1.2 Incident reporting**

SALW Control incident reports shall follow two formats. A SALW Control initial incident report and a SALW Control detailed incident report.

##### **4.1.2.1 SALW Control initial incident report**

The SALW Control initial incident report comprises two parts; an immediate report by the fastest means, normally radio or telephone and the full initial incident report in writing by facsimile or email. The initial incident report provides essential information about the incident to permit the national SALW authority to assist with any emergency response and if necessary to provide a general warning to other SALW Control organizations in relation to an unforeseen hazard or the application of standards, SOPs or equipment.

##### **4.1.2.2 SALW Control detailed incident report**

The SALW Control detailed incident report is the result of an internal investigation carried out by the SALW Control organization involved. The report shall be completed by an internal Investigation Officer (IO), but this shall not be any person directly involved with the incident. This report shall be

initiated by the SALW Control organization involved and completed as soon as practically possible after the incident (normally within 10 days). In the case of a non-ammunition incident the requirement for a SALW Control detailed incident report will be decided on a case-by-case basis by the national authority. For some incidents of a minor nature the SALW Control detailed incident report may constitute the formal incident investigation. See Appendix 1 to Annex D.

#### 4.1.3 Reporting procedures

An example of SALW Control incident reporting procedures is included in Annex C. This includes example formats for the initial incident report (Appendix 1 to Annex C) and the detailed incident report (Appendix 2 to Annex C).

### 4.2 Formal investigations

#### 4.2.1 General requirements

The aim of the SALW Control incident formal investigation is to identify problems or opportunities to improve the safety and quality of the SALW Control process. It is neither a criminal investigation nor an investigation to assist in the assessment of a current or possible future insurance claim. As such, all employees of SALW Control organisations should be encouraged to provide complete and accurate information about the circumstances surrounding the incident and opinions on ways to improve procedures that may assist in preventing a similar incident occurring.

The following incidents should be subject to formal investigation by an appropriately qualified and experienced third party:

- a) a weapons, ammunition or explosives accident resulting in injury or death;
- b) a weapons, ammunition or explosives incident resulting in damage to property;
- c) a weapons, ammunition or explosives incident causing damage that may result in a major claim for compensation from a member of the public;
- d) a weapons, ammunition or explosives incident involving a major event causing significant damage;
- e) a weapons, ammunition or explosives incident where workers, visitors or the local population are exposed to intolerable risk that results from the application of approved standards or procedures including the failure of equipment;
- f) an ammunition or explosives incident involving the unplanned detonation of ammunition or explosives on a SALW Control worksite;
- g) a weapons, ammunition or explosives incident which could attract media attention or media report; and
- h) when considered necessary by the national authority a non weapon, ammunition or explosive related accident on a SALW Control worksite that requires the urgent evacuation of a casualty to an advanced medical facility for treatment.

**Note:** Weapon, ammunition and explosive incidents may also be subject to formal investigation in order to obtain operational information for the purposes of behaviour change analysis, or as a random sampling investigation of civilian accidents. Such investigations would most likely be directed at a national level and will be required to be carried out by an appropriately qualified and experienced third party.

#### 4.2.2 Investigation procedures

A weapon, ammunition or explosives incident formal investigation may consist of one of three levels of investigation, a Board of Inquiry (BOI), an independent investigation and an internal investigation. Appendix 1 to Annex D has a guide for selecting an appropriate level for a formal investigation.

BOI and independent investigations are initiated by the national authority by the issuing of Terms of Reference (TOR) appointing personnel to carry out an investigation. Appendix 2 to Annex D has an example of TOR for a BOI or independent investigation.

Internal investigations are only carried out for weapon, ammunition or explosive incidents of a minor nature and normally the detailed incident report will constitute this investigation. Detailed incident reports shall be initiated by SALW Control organisations for all reportable incidents (see clause 4.1.1 above) without reference to the national authority. Where a BOI or an independent investigation is required a detailed incident report should precede the formal investigation and form part of the formal investigation report.

If circumstances warrant it the national authority may issue TOR to a SALW Control organisation for an internal investigation. If this occurs this internal investigation will replace the detailed incident report.

The authority initiating a formal investigation should ensure that:

- a) the investigation commences as soon as possible;
- b) the personnel selected to conduct a formal investigation had no involvement with the incident and have the qualifications, experience and skills<sup>7</sup> needed to meet the requirements specified in the TOR for the investigation;
- c) a copy of the TOR is provided to the SALW Control organisation(s) that may be asked to assist with the formal investigation and the development of recommendations on improvements to the process under investigation;
- d) the incident site is preserved as far as possible, until released by the BOI or investigating officer, in order to prevent loss of valuable information;
- e) photographs of the incident site are taken immediately; and
- f) unless exceptional circumstances exist, the investigation report is submitted on time and that it is complete, clear, concise and accurate (including conclusions and recommendations for improvement).

**Note:** BOIs should comprise a minimum of three appropriately qualified and experienced members of the senior or technical management within a SALW Control programme. The principal member should be from the national authority, one member from a third party SALW Control organisation (for example from UNDP BCPR SADU or SEESAC or a training or monitoring organisation etc.) and one member from the organisation involved with the incident, but this shall not be any person directly involved in the incident.

**Note:** The independent investigation shall be carried out by an appropriately qualified and experienced independent Investigation Officer (IO) appointed by the national authority.

**Note:** The internal investigation shall be carried out by an appropriate qualified and experienced member of the SALW Control organisation involved, but this shall not be any person directly involved in the incident.

An example of a SALW Control incident investigation SOP is included in Annex D.

### 4.3 Reporting and dissemination

The following information should be widely distributed:

- a) the circumstances contributing to and harm resulting from the incident;
- b) an analysis of the information collected during the investigation; and
- c) the findings of the investigation (i.e. the conclusions and recommendations drawn from the investigation process).

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<sup>7</sup> UNDP BCPR SADU or SEESAC can advise on the level of qualifications and experience necessary for an effective weapon, ammunition or explosive accident or incident investigation.

The national authority, or an organisation acting on its behalf, shall disseminate information on SALW Control incidents. In the absence of a national authority, SALW Control organisations should make this information available to other SALW Control organisations operating in the country, and to other national authorities through UNDP BCPR SADU. In the event of the identification of new hazards, the dissemination of information should be immediate.

## **5 Areas of responsibility**

### **5.1 National SALW authority<sup>8</sup>**

The national authority, or an organisation acting on its behalf shall:

- a) establish and maintain procedures for the reporting and investigation of weapon, ammunition or explosives incidents. The procedures should be based on this standard and other relevant standards and national regulations;
- b) appoint personnel to investigate weapon, ammunition or explosives incidents in accordance with this standard;
- c) disseminate the findings of all investigation reports to all SALW Control organisations operating in the country, and importantly to UNDP BCPR SADU and SEESAC, who can then extract information for other national authorities; and
- d) ensure that the results of any medical examination, post mortem or coroner's report are made available to the parent SALW Control organisation.

**Note:** It is highly probable that this information will only be made available for public release after the completion of the formal investigation. Should the medical results cast any doubt on the findings of the formal investigation, then the national authority shall re-open the investigation to take into account this new evidence.

### **5.2 SALW Control organisation**

SALW Control organisations shall:

- a) report all reportable weapon, ammunition or explosives incidents to the national authority in a timely manner;
- b) take immediate photographs of a weapon, ammunition or explosives incident site, and then preserve it until the site is inspected and released by the BOI or investigating officer;
- c) provide access, and if necessary administrative support to incident investigation personnel;
- d) make available for the investigation the original worksite records, SOPs, training records and radio log;
- e) assist staff appointed to investigate weapon, ammunition or explosive incidents; and
- f) in the absence of a national authority, make the findings of investigations available to other SALW Control organisations operating in the country and to other national authorities through UNDP BCPR SADU and SEESAC.

### **5.3 SALW Control workers**

Workers on SALW Control programmes shall;

- a) apply appropriate standards and SOPs designed to prevent weapon, ammunition and explosives incidents;

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<sup>8</sup> In this case the national SALW authority, if the same as the national SALW commission, may be responsible to itself.

- b) report perceived weaknesses in equipment training and procedures;
- c) report reportable incidents; and
- d) assist in the investigation of incidents.

#### **5.4 Regional organizations**

In certain areas of the world, regional organizations have been given a mandate by their member states to coordinate and support SALW control programmes within a state national boundaries. (For example EUFOR within Bosnia and Herzegovina).

In these circumstances the regional organization should assume many of the responsibilities and roles of the national SALW authority, and could also act as a conduit for donor resources. The responsibilities and roles of regional organizations for SALW control will vary from state to state and may be subject to specific Memoranda of Understanding, or similar agreements.

#### **5.5 SEESAC**

SEESAC shall provide operational assistance, technical assistance and management information, within resources and on request, to all SALW Control intervention programmes within South Eastern and Eastern Europe, and assistance to SALW Control intervention programmes worldwide through the drafting and issuing of RMDS/G.

## **Annex A (Informative) References**

The following normative documents contain provisions, which, through reference in this text, 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 standard 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 and IEC maintain registers of currently valid ISO or EN:

- a) RMDS/G 05.30 - Weapons Storage and Safety;
- b) RMDS/G 05.40 - Ammunition and Explosives Storage and Safety; and
- c) RMDS/G 05.60 - EOD Support to SALW Control Programmes.

The latest version/edition of these references should be used. SEESAC hold copies of all references used in this standard. A register of the latest version/edition of the RMDS/G standards, guides and references is maintained by SEESAC, and can be read on the RMDS/G website: <http://www.seesac.org/>. National SALW authorities, employers and other interested bodies and organisations should obtain copies before commencing SALW programmes.

## Annex B (Informative) Terms and definitions

### B.1.1

#### **accident**

an undesired event which results in **harm**

**Note:** Modified from definition in OHSAS 18001:1999,

### B.1.2

#### **ammunition**

See **munition**

### B.1.3

#### **ammunition accident**

an incident at a SALW Control workplace involving a weapon.

### B.1.4

#### **ammunition incident**

an incident at a SALW Control workplace involving conventional ammunition or explosives.

### B.1.5

#### **destruction**

the process of final conversion of weapons, ammunition, mines and explosives into an inert state that can no longer function as designed.

### B.1.6

#### **disposal site**

an area authorised for the destruction of **ammunition** and **explosives** by **detonation** and burning.

### B.1.7

#### **explosives**

a substance or mixture of substances which, under external influences, is capable of rapidly releasing energy in the form of gases and heat. [AAP-6].

### B.1.8

#### **explosive ordnance**

all munitions containing **explosives**, nuclear fission or fusion materials and biological and chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket and small arms **ammunition**; all **mines**, torpedoes and depth charges; pyrotechnics; clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature. [AAP-6]

### B.1.9

#### **Explosive Ordnance Disposal (EOD)**

the detection, identification, evaluation, render safe, recovery and final disposal of unexploded explosive ordnance. It 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.<sup>9</sup>

**Note:** The presence of ammunition and explosives during SALW Control operations will inevitably require some degree of EOD response. The level of this response will be dictated by the condition of the ammunition, its level of deterioration and the way that it is handled by the local community.

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<sup>9</sup> UN Guidelines for Stockpile Destruction, June 2000.

**B.1.10  
firearm**

a barrelled weapon from which any shot, bullet or other projectile can be discharged and that is capable of causing serious bodily injury or death to a person, and includes any frame or receiver of such a barrelled weapon and anything that can be adapted for use as a firearm.<sup>10</sup>

**B.1.11  
fuze**

a device which initiates an **explosive** train. [AAP-6]

**B.1.12  
incident**

an event that gives rise to an accident or has the potential to lead to an accident.

**B.1.13  
munition**

a complete device charged with **explosives**, propellants, pyrotechnics, initiating composition, or nuclear, biological or chemical material for use in military operations, including **demolitions**. [AAP-6].

**Note:** In common usage, 'munitions' (plural) can be military weapons, ammunition and equipment.

**B.1.14  
national authority**

*in the context of SALW, the term refers to..* the government department(s), organization(s) or institution(s) in a country charged with the regulation, management and coordination of **SALW** activities.

**B.1.15  
safe**

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

**B.1.16  
safety**

the reduction of risk to a tolerable level. [ISO Guide 51:1999(E)]

degree of freedom from unacceptable **risk**. [ISO Guide 51: 1999(E)]

**B.1.17  
Small Arms and Light Weapons (SALW)**

all lethal conventional munitions that can be carried by an individual combatant or a light vehicle, that also do not require a substantial logistic and maintenance capability.

**Note:** There are a variety of definitions for SALW circulating and international consensus on a 'correct' definition has yet to be agreed. For the purposes of RMDS/G the above definition will be used.

**B.1.18  
standard**

a standard is 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.

**Note:** RMDS/G aim to improve safety and efficiency in SALW Control by promoting the preferred procedures and practices at both headquarters and field level. To be effective, the standards should be definable, measurable, achievable and verifiable.

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<sup>10</sup> Criminal Code of Canada (CCofC) Section (S) 2 'Interpretation' Paragraph 2.

**B.1.19**  
**standing operating procedures (SOPs)**  
standard operating procedures

instructions which define the preferred or currently established method of conducting an operational task or activity.

**Note:** Their purpose is to promote recognisable and measurable degrees of discipline, uniformity, consistency and commonality within an organization, with the aim of improving operational effectiveness and safety. SOPs should reflect local requirements and circumstances.

**B.1.20**  
**tolerable risk**

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

**B.1.21**  
**Unexploded Ordnance (UXO)**

explosive ordnance which has been primed, fuzed, armed or otherwise prepared for action, and which has been dropped, fired, launched, projected, or placed in such a manner as to constitute a hazard to operations, installations, personnel or material and remains unexploded either by malfunction or design or for any other cause.<sup>11</sup>

**B.1.22**  
**weapon**

any thing used, designed or used or intended for use:<sup>12</sup>

- a) in causing death or injury to any person; or
- b) for the purposes of threatening or intimidating any person and without restricting the generality of the foregoing, includes a firearm.

**B.1.23**  
**workplace**

all places where employees need to be or to go by reason of their work and which are under the direct or indirect control of the employer. [ILO R164]

**Note:** During SALW Control operations the workplace will be those areas where weapons, ammunition and explosives are collected, stored and/or destroyed.

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<sup>11</sup> NATO Definition.

<sup>12</sup> Criminal Code of Canada (CCofC) Section (S) 2 'Interpretation' Paragraph 2.

## Annex C (Informative) Example of incident reporting procedures

<b>Title:</b> Weapon and ammunition incident reporting procedures.	No: RMDS/G 04.45	Date: 01/04/06	
<b>Intent:</b> Efficient and accurate reporting of weapon and ammunition incidents providing information required to assist in emergency response and initiation of investigation procedures.	<b>Process user:</b> Operations manager.		
	<b>Process owner:</b> Director operations.		
<b>Process description</b>	<b>Responsibility</b>		
	Worksite Manager	SALW Org	National Authority Other Authority
<b>Weapon or ammunition incident</b> Implement SALW Control organisation's emergency response SOP and incident-site preservation SOP.	○		
<b>Collect data and prepare initial incident report</b> See Appendix 1 to this Annex for an example of the information to be included in the initial incident report.	↓ □		
<b>Submit initial incident report (two parts)</b> Submit initial notification with key information by radio or telephone, follow up with written report by facsimile or email.	↓ □ → □ → □		(See note 1) □
<b>Does incident identify an intolerable risk</b> a. such as an unforeseen hazard (sensitive fuzes, unknown ammunition type)? or b. in documented standards or approved SOPs including the failure of equipment issued to employees?			↓ ◇ yes no
<b>Send general warning message. See note 2 below</b> General warning message shall advise caution in relation to the unforeseen hazard or the application of the standards, SOPs or equipment.		□ → □	
<b>Is an external formal investigation required?</b> See Appendix 1 to Annex D for a guide on the decision making process. <b>See note 3 below.</b>		○ → □	
<b>Submit detailed incident report</b> Compile and submit detailed incident report. See Appendix 2 of this Annex for an example of a detailed incident report.		□ → ○	yes
<b>Appoint a board of inquiry (BOI) or external investigation officer</b> See Appendix 2 to Annex D for example terms of reference for a formal investigation.			□
<b>Investigate incident</b> SALW Control organisation shall assist with the formal investigation.			□
<p>Note: 1 Submit to police or other national authority as required or as appropriate.</p> <p>Note: 2 To all SALW Control organisations applying the same equipment, standards or SOPs or likely to meet the same new hazard.</p> <p>Note: 3 If the National Authority decides that an internal formal investigation is all that is required then the detailed incident report should constitute this investigation.</p>	<p><b>Legend</b></p> <p>Documents (multiple) □ □ □</p> <p>Process ○ ◇</p> <p>Decision ■</p>		

## Appendix 1 to Annex C (Informative) Example of weapon or ammunition initial incident report

From: SALW Control organisation name. **See note 1** Date /time report submitted. **See note 2**

To: National Authority, programme name.

Subject: **Weapon or Ammunition Initial Incident Report**

1. Organisation sub unit, site office/project number, team name/number.
2. Location (province, district, village, task no).
3. Date and time of incident.
4. Details of casualty(ies) to include:
  - a) Names or casualty identification numbers (CIN). **See notes 3 and 4**
  - b) Description of injuries. **See note 5**
  - c) Treatment given.
  - d) Current condition of casualty(ies).
5. Evacuation methods, routes, destinations and estimated arrival times.
6. List equipment/facilities/infrastructure damaged. **See note 6**
7. Describe how the incident occurred. **See note 7**
8. Contact details of key personnel. **See note 8**
9. Any other information including: **See note 9**
  - a) Did the incident occur in a cleared, safe or contaminated area?
  - b) Device type (if known).
10. Any other relevant information. **See notes 9 and 10**

Note: 1 The highlighted information should be sent by radio or telephone immediately it is known. The full initial incident report (including all information) is then sent by facsimile or email as soon as practically possible. **(See note 10 below)**. This should be followed up by a radio or telephone message advising that the report has been sent. Timings for the submission of reports should be set by the national authority and included in national SALW Control standards.

Note: 2 Date and time the reports (initial report and full incident report) are sent.

Note: 3 A CIN is a number allocated to each worker on a worksite. The CIN is used when it is not appropriate to send casualty names by radio.

Note: 4 For workers, include name (or CIN) and appointment (i.e. EOD Operator, team leader, surveyor etc).

Note: 5 List injuries for each casualty separately referenced to the name or CIN.

- Note: 6 List the equipment, facilities or infrastructure damaged, including a short description of the extent of the damage, and where appropriate the name and contact details of owners.
- Note: 7 Include a short description of how the incident occurred.
- Note: 8 Provide contact details of the person(s) responsible for the coordination of the immediate response to the weapon or incident and investigation activities, for example the Worksite Supervisor and the Operations Manager. Provide radio callsigns or telephone numbers as appropriate.
- Note: 9 Provide as much information as possible about the circumstances surrounding the incident, specifically information which would assist in making decisions on the requirement to send out a general warning about inadequacies of equipment, a standard or SOP.
- Note: 10 Submission of the complete incident report should not be delayed in an effort to collect and analyse information regarding the incident.

## Appendix 2 to Annex C (Informative)

### Example of a weapon or ammunition detailed incident report

From: SALW Control organisation name. **See notes 1, 2 and 3**      Date report submitted.

To: National Authority, programme name.

Subject: **Weapon or Ammunition Detailed Incident Report**

References:

A. Weapon or Ammunition Initial Incident Report (copy attached).

B. Programme national SALW Control standards.

C. SALW Control organisation SOPs.

#### **Part 1 – Background** (This is a summary of some of the information from the initial report)

1. SALW Control organisation name.
2. Organisation sub unit, site office/project number, team name/number.
3. Name of Worksite Supervisor.
4. Location of incident (province, district, village, task no).
5. Date and time of incident.
6. Type of incident. (See clause 4.1.1)

#### **Part 2 – Details of Incident**

7. Provide a general description of how the incident occurred including locations; timings; SALW Control personnel (EOD teams, Weapon Collection teams or Demilitarization Facility) and any non SALW Control personnel involved; weapon, ammunition or explosives involved; and vehicles/equipment involved. Attach photographs, diagrams and incident plans (location plan and detailed site plan) as Annexes to the report to assist in clarifying the circumstances surrounding the incident. **See notes 4 and 5**

#### **Part 3 – Incident Site Conditions**

8. Describe the conditions on the incident site at the time of the incident in terms of worksite layout and marking and weather:
  - a) Worksite layout and marking. Describe the layout of the worksite in relation to the location of the incident covering control areas, general worksite markings and specific worksite markings in the location of the incident. Include dimensions and cross reference to SOPs where appropriate. Consider such things as the effects of the sun and weather on the worksite layout. Include details of the worksite layout on incident plans attached as an Annex to the report.
  - b) Weather. Describe the weather at the time of the incident.
9. Provide photographs of the site to highlight the incident site conditions.

#### **Part 4 – Team and Task Details**

10. Team details. Provide details of the size and composition of the team (EOD operators, team leaders, supervisors, medics etc), including EOD, Weapon Collection or Demilitarization teams; the qualifications (formal and refresher training) and experience (types of work carried out, locations, worksite conditions and weapons or ammunition encountered); the most recent refresher training and subjects covered; the last period of leave/stand down; the results of recent monitoring (both internal and external) carried out on the team; and any known problems with the team. Provide a comparison between the team in general and any individuals involved in the incident.

11. Task details. Provide details of the task to include the Threat Assessment, Collection Plan, Demilitarization Plan as appropriate.

12. Include copies of training records, monitoring reports, destruction reports, task progress reports or any other administration documentation required as an Annex.

#### **Part 5 – Equipment and Procedures Used**

13. Equipment used. Provide details of the equipment being used on the site relevant to the incident. This may cover EOD equipment, Personal Protective Equipment (PPE), demolition or demilitarization equipment.

14. Procedures used. Provide an overview of any procedures used related to the incident. This may be referenced to SOPs.

15. Work routines. Provide details of the work routines being followed on the task at the time of the incident and the number of hours worked by personnel (including those involved in the incident) on the day prior to the incident occurring. If work routines involve handovers between personnel, provide details of when the last handover occurred prior to the incident and the details of what is covered during handovers for example, equipment checks, briefings etc. This may be referenced to SOPs.

#### **Part 6 – Explosive Hazards Involved**

16. Provide details of any ammunition or explosives that were involved in the incident. For incidents involving a detonation provide details of blast holes (size and depth); mine/UXO/AXO or other debris located and any known or suspected items involved. Provide explanations as to why an item is either known or only suspected.

17. Provide photographs and technical details for any items located or photographs of blast holes and debris as an Annex to the report.

#### **Part 7 – Details of Injuries**

18. Provide details of all personnel injured as a result of the incident. Include names, occupation, details of injuries and cross reference the names to the activities that the personnel were carrying out at the time of the incident. All injured personnel no matter how minor the injuries they received are to be included. Also include copies of medical records and injury data sheets as Annexes to the report. An example of an injury data sheet is included at Appendix 3 to this Annex. The location of the injured personnel, immediately after the incident occurred, should be shown on the incident detailed site plan.

#### **Part 8 – Equipment/Property/Infrastructure Damage**

19. Provide details of all equipment, property or infrastructure damaged as a result of the incident:

a) for equipment include detailed descriptions to include owner, make, model, age, serial numbers (where applicable), current value (if known), details of damage,

insurance held by the owner/organisation and if possible an assessment of the cost of repair/replacement. (See clause 20 below for the requirements covering PPE involved in the incident); and

- b) for property and infrastructure provide details of the owner(s), damage incurred, insurance held by the owner(s) and if known the cost of restitution or repair.

20. PPE. Provide details of any PPE involved in the incident by type/function, make, model or any other identifying details. Describe any damage to the PPE and provide comment as to the effectiveness or otherwise of the PPE in preventing injury (or more serious injury) to personnel involved in the incident.

21. Include photos of damaged equipment, property or infrastructure and copies of any other supporting evidence (ownership papers, property deeds, insurance details, repair quotes etc) as Annexes to the report.

### **Part 9 – Medical and Emergency Support**

22. Provide details of the medical and emergency support (communications and evacuation transport) available at the incident site prior to the incident occurring. This may be cross referenced to SOPs. Also if applicable to the incident, include details of the frequency of accident response plan practices and the date the last practice was carried out.

23. Provide timings for key activities during the casualty evacuation for example the evacuation of the casualty(ies) off the incident site, the arrival at the initial medical facility, departure from the initial medical facility and arrival at the final medical facility.

24. Comment on the effectiveness or otherwise of the medical and emergency support in terms of planning and preparation, medical equipment and supplies, communications, evacuation transport, medical treatment facilities and external support (from other mine action organisations) to the casualty evacuation. Where deficiencies were identified provide details and recommendations for improvements.

### **Part 10 – Reporting Procedures**

25. Comment on the effectiveness or otherwise of the initial incident reporting procedures carried out.

### **Part 11 – Any other Matters of Relevance. See note 6**

26. Include any other matters relevant to the incident that have not already been covered in this example.

### **Part 12 – Discussion, Conclusions and Recommendations**

27. Provide any additional discussion, conclusions and recommendations made.

Signature of Investigating Officer  
Name of Investigating Officer

Annexes:

A. Copy of the initial incident report.

- |    |  |
|----|--|
| B. | Witness statements.  |
| C. | Incident location and detailed site plans.   |
| D. | Site photographs.  |
| E. | Training records, monitoring reports, clearance plans, demilitarization plans, task progress reports or any other administration documentation required. |
| F. | Photographs and technical details of items located, blast holes or ammunition debris.  |
| G. | Medical records or injury data sheets.   |
| H. | Photographs of damaged equipment, property or infrastructure.  |
| I. | Copies of equipment/property ownership documentation (ownership papers, property deeds, insurance details etc).  |
| J. | Damage repair quotes/estimates.  |

Note: 11 The detailed incident report shall be prepared as soon as practically possible after the incident has occurred. The report shall be completed by an appropriately qualified and experienced investigating officer (IO) from the SALW Control organisation involved, but this shall not be any person directly involved in the incident.

Note: 12 In some situations the detailed incident report may constitute the formal incident investigation. See Appendix 1 to Annex D.

Note: 13 The National Authority should set the time limit for SALW Control organisations to complete the detailed incident report with details included in national SALW Control standards.

Note: 14 For accidents (see clause 4.1.1 a and f) include details of the activities being carried out when the accident occurred.

Note: 15 For a failure in standards or SOPs or a failure with equipment (see clause 4.1.1 d) provide details of the procedures or equipment involved, how the failure was discovered/occurred and potential consequences of the failure if not rectified.

Note: 16 Not all of the parts in this example are applicable to all incidents required to be reported.

## Appendix 3 to Annex C (Informative) Example of an injury data sheet

SALW Control organisation name:

Location (province, district, village, task no):

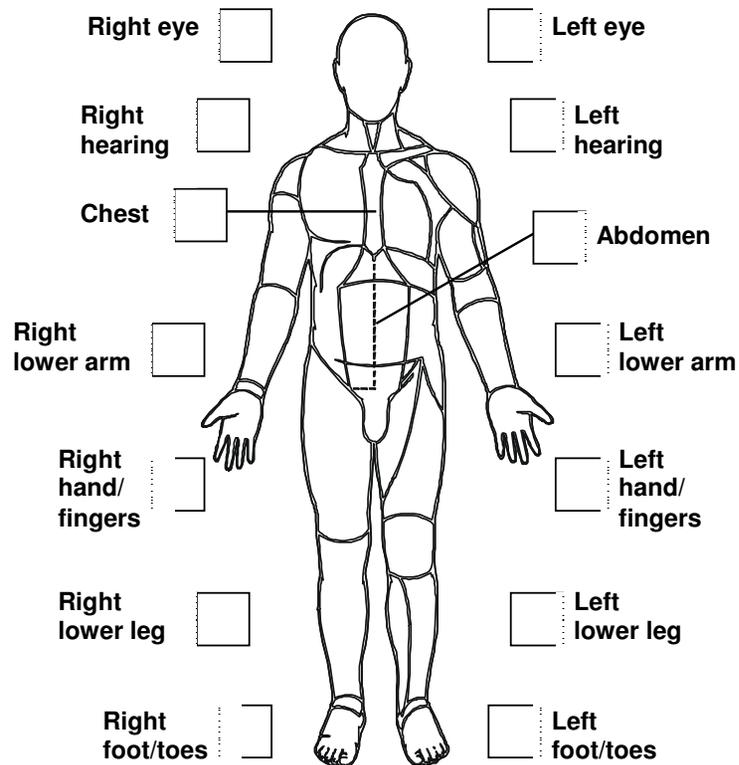
Casualty name or CIN:

Explain the cause of injury (ies): **See Note 2**

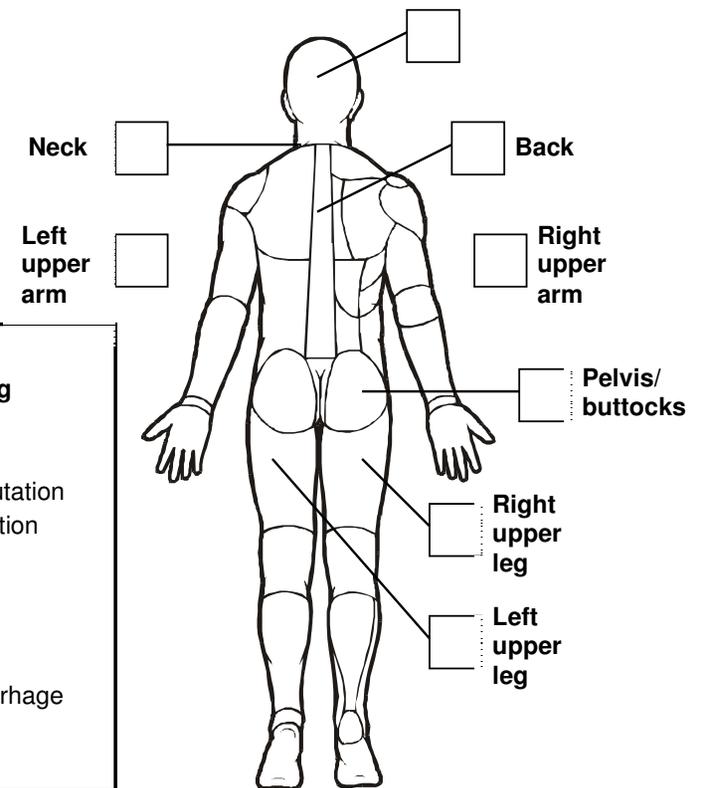
Organisation sub unit, site office/project number, team name/number:

Date and time of incident:

Gender and age:



Legend	
Code	Meaning
A	Abrasions
AM	Amputation
TAM	Traumatic Amputation
B	Burn/Discolouration
D	Dislocation
F	Fracture
FR	Fragment
H	Haemorrhage
IH	Internal Haemorrhage
L	Lacerations
LO	Loss of function



- Note: 1    **Instructions for completing the form.** Place an 'X' in each box indicating parts of the body where there was no noticeable injury. For parts of the body that were injured place the relevant code(s) in the box. Codes are shown in the legend. It may not be possible to indicate all injuries without specialist medical advice.
- Note: 2    Cause of injuries should be kept to one phrase for example, 'tampered with ammunition'; 'hit by round from AK 47'; or 'cut leg using chainsaw'.

## Annex D (Informative)

### Example of weapon or ammunition incident investigation SOP

<b>Title:</b> Investigation of weapon or ammunition incidents.	No:RMDS/G 04.45	Date: 01/04/06	
<b>Intent:</b> Improve safety and quality in SALW Control through the collection, analysis and dissemination of information on the circumstances surrounding a weapon or ammunition incident.	<b>Process user:</b> Operations manager.		
	<b>Process owner:</b> Director operations.		
Process Description	Responsibility		
	SAWL Org(s)	National Authority	BOI/IO
<b>Weapon or ammunition incident</b> Implement SALW Control organisation's emergency response SOP and incident-site preservation SOP. Submit initial incident report (two parts).	○ →	□	
<b>Determine level of investigation required.</b> See Appendix 1 to this Annex for a guide for selecting an appropriate level for a formal investigation.		↓ □	
<b>Is a Board of Inquiry (BOI) or independent investigation required?</b>		◇ yes	
<b>Detailed incident report.</b> (See Note 1) SALW Control organisation completes detailed incident report.	○ →	□	
<b>Draft Terms of Reference (TOR) for formal investigation</b> Include copy of detailed incident report. See Appendix 2 to this Annex for an example of TOR for a formal investigation.		□	
<b>Appoint BOI or independent IO</b> Provide BOI/IO with TOR for formal investigation and provide copies to organisation(s) involved. Provide BOI/IO with administrative support needed, i.e. transport, accommodation and meals.	□	□	□
<b>BOI/IO undertake investigation</b> in accordance with TOR, with support and assistance from the organisation(s) and demining workers involved in the incident.			□
<b>Is the formal investigation and report completed on time?</b>		◇ no	◇ yes
<b>Submit interim report</b> Provide update on progress to date, advise reason for delay and expected date of completion.	□	□	□
<b>Submit final report</b> Ensuring that report is accurate, clear, concise and complete.		□	□
<b>Analyse report and disseminate information on findings</b> Send information to SALW Control organisations and UNDP BCPR SADU.	□	□	
<b>Document report in data base</b> Analyse trends. Disseminate information on trends. Include incident on agenda of next technical working group.	□	□	
<p>Note: 1 The requirement for SALW Control organisations to complete a detailed incident report should be mandatory irrespective of the level of formal investigation required. If the National Authority then decides that an internal formal investigation is all that is required then the detailed incident report becomes the formal investigation.</p>	<p><b>Legend</b></p> <p>Documents (multiple) <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></span> <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></span> <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></span></p> <p>Process <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></span> <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></span> <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></span></p> <p>Decision <span style="display: inline-block; width: 15px; height: 15px; background-color: #cccccc; margin-right: 5px;"></span> <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></span> <span style="display: inline-block; width: 15px; height: 15px; border: 1px solid black; margin-right: 5px;"></span></p>		

## Appendix 1 to Annex D (Informative) Guide for selecting the level for a formal investigation

	Type of Formal Investigation		
	Board of Inquiry	Independent Investigation	Internal Investigation
<b>1. A weapon or ammunition accident causing:</b>			
a. minor injury to a worker.			
b. serious injury to a worker.			
c. death of a worker.			
d. any injury to a non-worker.			
e. death of a non-worker.			
<b>2. A weapon or ammunition incident resulting in:</b>			
a. damage to SALW Control organisation equipment of value less than US\$ 5,000.			
b. damage to SALW Control organisation equipment of value from US\$ 5001 to US\$50,000.			
c. damage to SALW Control equipment of value more than US\$50,000.			
d. damage that may result in a major claim for compensation from a member of the public.			
e. a major event that caused significant damage.			
<b>3. A weapon or ammunition incident:</b>			
a. where workers, visitors or the local population are exposed to intolerable risk that results from the application of approved standards or procedures including the failure of equipment.			
b. involving the unplanned detonation of ammunition or explosives on a worksite.			
c. which could attract media attention or media report.			
<b>4. A non weapon or ammunition related accident:</b>			
a. on a worksite that requires the urgent evacuation of a casualty to an advanced medical facility for treatment.			

Note: 1 Boards of Inquiry (BOI) should comprise a minimum of three appropriately qualified and experienced members of the senior or technical management within a mine action programme. The principal member from the national authority, one member from a third party SALW Control organisation and one member from the organisation involved with the incident, but this shall not be any person directly involved in the incident.

Note: 2 The independent investigation shall be carried out by an appropriately qualified and experienced independent Investigation Officer (IO) appointed by the national authority.

Note: 3 The internal investigation shall be carried out by an appropriate qualified and experienced member of the SALW Control organisation involved, but this shall not be any person directly involved in the incident.

## Appendix 2 to Annex D (Informative) Example terms of reference for a formal investigation

	National Authority
	Address
	Location
File reference (incident serial number)	Date
Name of recipient(s)	
Address	
Location	

**APPOINTMENT OF PERSONNEL TO CARRY OUT A FORMAL INVESTIGATION**

Reference:

A. Programme name national SALW Control standards.

B. Weapon or ammunition detailed incident report. (Copy Attached).

1. You (*name(s) of organisation(s)*) are hereby appointed by (*name and appointment*) of the (*National Authority*) to investigate the circumstances surrounding the weapon/ammunition incident that occurred on (*time and date*) at (*location*) involving (*personnel from, if applicable to the incident*) (*organisation name*).

2. This incident involved (*a brief note as to what the incident was about*).

3. Your formal investigation and report are specifically to cover the following:

- a) details of the task(s) being carried out at the time of the incident;
- b) when and where the incident occurred;
- c) how the incident occurred including a description of the events that led up to the incident, personnel, equipment and procedures involved;
- d) the cause, nature and extent of injuries caused to personnel or damage to equipment, property or infrastructure as a result of the incident;
- e) why the incident occurred and whether the incident could have been avoided;
- f) any remedial action necessary to prevent future incidents of this nature occurring; and
- g) any other matters that the BOI/IO considers relevant to the incident.

4. In investigating the incident the following factors are to be considered:

- a) the level of training and experience of the personnel involved in the incident, including where applicable, supervisory and managerial staff. This should also cover the dates and subjects covered for the most recent refresher training for the team, including if the members involved in the incident attended that refresher training;
- b) the work routines being followed prior to and at the time of the incident including work start and finish times and rest period routines. Investigate if any handovers were occurring between personnel working on the site and procedures followed for these handovers including any briefings involved;

- c) the dates of the last leave period or day off work for personnel involved in the incident;
  - d) the dates and results of recent monitoring (internal and external) of the team involved in the incident;
  - e) the procedures being followed by the personnel involved in the incident for the activities being carried out at the time of the incident;
  - f) the safety equipment or protective clothing required to be used, or worn by the personnel involved in the incident, and whether the equipment or clothing was worn or used and if so, whether it was done so correctly. Also consider whether the use of safety equipment or protective clothing contributed to, or could have contributed to, a reduction in any injuries to personnel;
  - g) the medical and emergency support available to the team/personnel involved in the incident and whether this support was adequate or not in the circumstances of the incident. If the medical support was not adequate consider the possible affect this may have had on any casualties resulting from the incident;
  - h) whether the incident was contributed to or caused by any of the following;
    - (1) any weakness in command and control;
    - (2) neglect, carelessness or misconduct by any of the personnel involved;
    - (3) personnel being given inappropriate or dangerous orders by supervisory or managerial staff;
    - (4) non-compliance with orders, instructions or procedures;
    - (5) the use of alcohol, drugs or prescribed medication;
    - (6) deficiencies in standards or SOPs;
    - (7) incorrect use of equipment;
    - (8) any shortfall in training of personnel involved;
    - (9) injury or sickness to any personnel involved in the incident;
    - (10) malfunctioning of equipment or materials, including explosives;
    - (11) the prevailing weather conditions; and
    - (12) any deficiencies in basic support to personnel on the site for example provision of primary health care, shelter, food and water.
5. The report is to summarise the results of the investigation, draw conclusions as to the factors that contributed to the incident and make whatever recommendations necessary to prevent a future incident of this nature occurring.
6. The following documents should be included with the report:
- a) a copy of the document appointing personnel to carry out a formal investigation (this document);
  - b) a copy of the weapon or ammunition detailed incident report from the organisation involved in the incident;
  - c) witness statements;
  - d) sketches, diagrams, location and site plans as appropriate;

- e) photographs highlighting important aspects of the incident for example site conditions; weapon, ammunition or explosives involved; blast holes and blast debris; injuries to personnel; and equipment, property or infrastructure damage;
- f) task documentation, which may include survey reports, clearance plans, demilitarization worksite plans or worksite documentation;
- g) extracts from standards and SOPs as required;
- h) medical records or coroner's reports; and
- i) any further documentary evidence gathered during the investigation.

7. The investigation report is to be submitted by (*time and date*). In the event that the completed report is not able to be submitted on the date indicated an interim report outlining progress with the investigation and the reason for the delay is to be submitted on that date and further interim reports provided every ( ) days until the completed investigation report is submitted.

Signature of appointing authority  
Name of appointing authority