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**SECTOR SKILLS COUNCIL FOR SCIENCE,  
ENGINEERING AND MANUFACTURING  
TECHNOLOGIES**

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**EXPLOSIVES, MUNITIONS AND SEARCH  
OCCUPATIONS<sup>1</sup>**

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**EXPLOSIVE SUBSTANCES AND ARTICLES  
NATIONAL OCCUPATIONAL STANDARDS:**

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**DISPOSAL (ESA KEY ROLE 11)**

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**FEBRUARY 2006**

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<sup>1</sup> 2010 - Sectoral responsibility for these NOS has been transferred to the Cogent Sector Skills Council Ltd (<http://www.cogent-ssc.com>) by the UK Commission for Employment and Skills ([www.ukces.org.uk](http://www.ukces.org.uk)).

# CONTENTS

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<a href="#">11.1</a>	Assess the explosive substances and/or articles for disposal .....	1
<a href="#">11.2</a>	Determine the existence of a suitable disposal procedure for explosive substances and/or articles .....	2
<a href="#">11.3</a>	Adapt an existing explosive substances and/or articles disposal procedure.....	3
<a href="#">11.4</a>	Design a new disposal procedure for explosive substances and/or articles .....	4
<a href="#">11.5</a>	Plan the disposal of explosive substances and/or articles (complex) .....	5
<a href="#">11.6</a>	Plan the disposal of explosive substances and/or articles (non-complex) .....	6
<a href="#">11.7</a>	Manage tasks for the disposal of explosive substances and/or articles .....	7
<a href="#">11.8</a>	Carry out pre-disposal tasks for explosive substances and/or articles.....	8
<a href="#">11.9</a>	Contribute to pre-disposal tasks for explosive substances and/or articles .....	9
<a href="#">11.10</a>	Dispose of explosive substances and/or articles by complex mechanical breakdown procedures .....	10
<a href="#">11.11</a>	Dispose of explosive substances and/or articles by complex chemical breakdown procedures.....	11
<a href="#">11.12</a>	Dispose of explosive substances and/or articles by complex biological breakdown procedures .....	12
<a href="#">11.13</a>	Dispose of explosive substances and/or articles by complex burning procedures.....	13
<a href="#">11.14</a>	Dispose of explosive substances and/or articles by complex incineration procedures .....	14
<a href="#">11.15</a>	Dispose of explosive substances and/or articles by complex deflagration procedures.....	15
<a href="#">11.16</a>	Dispose of explosive substances and/or articles by complex detonation procedures.....	16
<a href="#">11.10A</a>	Dispose of explosive substances and/or articles by non-complex mechanical breakdown procedures.....	17
<a href="#">11.11A</a>	Dispose of explosive substances and/or articles by non-complex chemical breakdown procedures.....	18
<a href="#">11.12A</a>	Dispose of explosive substances and/or articles by non-complex biological breakdown procedures .....	19
<a href="#">11.13A</a>	Dispose of explosive substances and/or articles by non-complex burning procedures.....	20

<a href="#">11.14A</a>	Dispose of explosive substances and/or articles by non-complex incineration procedures .....	21
<a href="#">11.15A</a>	Dispose of explosive substances and/or articles by non-complex deflagration procedures.....	22
<a href="#">11.16A</a>	Dispose of explosive substances and/or articles by non-complex detonation procedures.....	23
<a href="#">11.17</a>	Dispose of explosive substances and/or articles by function as intended procedures .....	24
<a href="#">11.18</a>	Contribute to the disposal task for explosive substances and/or articles .....	25
<a href="#">11.19</a>	Carry out post-disposal tasks for explosive substances and/or articles .....	26
<a href="#">11.20</a>	Contribute to post-disposal tasks for explosive substances and/or articles .....	27

[BACK TO FIRST PAGE OF CONTENTS](#)

## Unit 11.1 Assess the explosive substances and/or articles for disposal

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### Contexts

- Explosive substances and/or articles: immediately identifiable; those which require further investigation
- Hazards and risks caused by: complexity of the explosive substances or articles; condition of the explosive substances or articles; primary hazards; secondary hazards
- Information: with access to full information; with access to limited information

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### Performance Criteria

You need to:

- a work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- b establish the identity and condition of the explosive substances or articles
- c characterize accurately the hazards pertaining to the disposal
- d quantify the risks of the disposal
- e record relevant information in accordance with your organisation's procedures
- f maintain the requirements of confidentiality at all times

### Knowledge Requirements

You need to know and understand:

- i the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- ii the relevance of personal protective equipment (PPE)
- iii the nature, characteristics, hazards and risks of the explosive substances and/or articles
- iv the actions to be taken in response to an unplanned event
- v information sources and documents that might identify the explosive substances and/or articles
- vi how to identify the hazards (eg condition, primary and secondary)
- vii how to carry out a risk assessment
- viii any previous results of tests, trials or disposals, and any manufacturer's, design authority or scientific literature
- ix your organisation's recording procedures
- x any confidentiality requirements
- xi your own level of authority
- xii when to refer to others for more information or a second opinion

[CONTENTS PAGE](#)

## Unit 11.2 Determine the existence of a suitable disposal procedure for explosive substances and/or articles

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### Contexts

- Technical, legal and cost implications: safety; environmental impact; value to the customer; value to your organisation
- Sources of information: databases; publications

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- identify the vital information and factors relevant to the disposal
- verify the assessment of the explosive substances and/or articles for disposal
- identify the most likely disposal procedures that meet your criteria
- decide whether an existing disposal procedure is suitable, on the basis of an analysis of the available evidence
- obtain agreement to your proposal
- identify other potentially valuable tasks that could be carried out concurrently
- document the agreed process in the appropriate format

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- how to verify the assessment of the explosive substances and/or articles
- the factors vital to the disposal (eg location, meteorological conditions, etc)
- how to carry out a risk assessment
- the disposal objectives
- sources of relevant information (eg technical publications)
- the resources needed to carry out the disposal (people, facilities, equipment, etc)
- your own level of authority
- when to refer to others for more information or a second opinion
- when and why a customer and/or peer review would be appropriate
- what might constitute value to your customer and/or your organisation
- when and how to advise the customer to pursue a different course of action
- when and why it might be appropriate to carry out other tasks concurrently
- the importance of documenting your actions and your rationale
- your organisation's recording procedures

[CONTENTS PAGE](#)

## Unit 11.3 Adapt an existing disposal procedure for explosive substances and/or articles

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### Contexts

- Technical, legal and cost implications: safety; environmental impact; value to the customer; value to your organisation
- Sources of information: databases; publications; informal sources of information

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- identify the vital information and factors relevant to the disposal
- verify the assessment of the explosive substances and/or articles for disposal
- identify the most likely disposal procedures that meet your criteria
- determine the procedure that has the closest fit to your requirement on the basis of an analysis of the available evidence
- adapt the procedure to meet the requirement
- develop a safe system of work
- obtain agreement to your proposal through a customer and/or peer review
- ensure that your adaptation meets the validation criteria
- identify other potentially valuable tasks that could be carried out concurrently
- document the agreed process in the appropriate format

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the results of the assessment
- how to carry out a risk assessment
- the basis on which disposal procedures are designed
- why a procedure is not suitable but might be adapted
- the factors vital to the disposal (eg location, meteorological conditions, etc)
- the disposal objectives
- sources of relevant information (eg technical publications)
- the resources needed to carry out the disposal (people, facilities, equipment, etc)
- your own level of authority
- when to refer to others for more information or a second opinion
- the validation process and criteria
- when and why a customer and/or peer review would be appropriate
- what might constitute value to your customer and/or your organisation
- when and how to advise the customer to pursue a different course of action
- how and why the adaptations proposed will impact on the hazards and risks associated with the procedure and conditions
- configuration and control procedures
- the importance of documenting your actions and your rationale
- your organisation's recording procedures

[CONTENTS PAGE](#)

## Unit 11.4 Design a new disposal procedure for explosive substances and/or articles

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### Contexts

- Technical, legal and cost implications: safety; environmental impact; value to the customer; value to your organisation
- Sources of information: databases; publications; informal sources of information

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- identify the vital information and factors relevant to the disposal
- verify the assessment of the explosive substances and/or articles for disposal
- confirm that there are no suitable existing disposal procedures
- ensure that your procedure meets the requirement
- develop a safe system of work
- obtain agreement to your procedure through a customer and/or peer review
- ensure that your procedure meets the validation criteria
- document the agreed process in the appropriate format

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the results of the assessment
- how to carry out a risk assessment
- the basis on which disposal procedures are designed
- why an existing procedure is deemed not suitable
- the format and approval process for the design of disposal procedures
- the factors vital to the disposal (eg location, meteorological conditions, etc)
- the disposal objectives
- sources of relevant information (eg technical publications)
- the resources needed to carry out the disposal (people, facilities, equipment, etc)
- your own level of authority
- when to refer to others for more information or a second opinion
- what might constitute value to your customer and/or your organisation
- when and why a customer and/or peer review would be appropriate
- configuration and control procedures
- the validation process and criteria
- the importance of documenting your actions and your rationale
- your organisation's recording procedures

[CONTENTS PAGE](#)

## Unit 11.5 Plan the disposal of explosive substances and/or articles (complex)

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### Contexts

- Resources: fully equipped; with limited resources
- Complexity: single complex procedures; multiple non-complex procedures
- Technical, legal and cost implications: safety; environmental impact; value to the customer; value to your organisation
- Sources of information: databases; publications

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- confirm the identity of the explosive substances and/or articles for disposal and their condition
- confirm that you have the appropriate procedure(s) for the explosive substances and/or articles to be disposed of
- ensure that any integration of different disposal procedures meets the requirements of a safe system of work
- identify any other disposal or test-related tasks that could be incorporated into your plan
- identify resource requirements that are appropriate to the disposal
- ensure that the facilities are fit for purpose for the disposal task to be carried out
- develop contingencies to accommodate any anticipated difficulties
- produce a clear and accurate plan in the appropriate format
- obtain agreement to your plan

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the quantity and condition of the explosive substances and/or articles(s) for disposal
- the disposal procedure(s) to be used
- the factors vital to the disposal (eg location, meteorological, environmental conditions, etc)
- the disposal objectives
- the resources needed to carry out the disposal (people, facilities, equipment, etc), and any constraints attached to them
- safe systems of work and supporting risk assessments
- what might constitute value to your customer and/or your organisation
- your own level of authority
- when to refer to others for more information or a second opinion

[CONTENTS PAGE](#)

## Unit 11.6 Plan the disposal of explosive substances and/or articles (non-complex)

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### Contexts

- Technical, legal and cost implications: safety; environmental impact; value to the customer; value to your organisation
- Sources of information: databases; publications

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- confirm the identity of the explosive substances and/or articles for disposal, and their condition
- confirm that you have the appropriate procedure for the explosive substances and/or articles to be disposed of
- identify resource requirements that are appropriate to the disposal
- ensure that the facilities are fit for purpose for the disposal task to be carried out
- produce a clear and accurate plan in the appropriate format
- obtain agreement to your plan

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the quantity and condition of the explosive substances and/or articles(s) for disposal
- the disposal procedure to be used
- the factors vital to the disposal (eg location, meteorological, environmental conditions, etc)
- the disposal objectives
- the resources needed to carry out the disposal (people, facilities, equipment, etc), and any constraints attached to them
- what might constitute value to your customer and/or your organisation
- safe systems of work and supporting risk assessments
- your own level of authority
- when to refer to others for more information or a second opinion

**[CONTENTS PAGE](#)**

## Unit 11.7 Manage tasks for the disposal of explosive substances and/or articles

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### Contexts

- Disposal: complex; non-complex
- Resources: full; limited
- Maintaining the integrity of the process: quality assurance; the disposal
- Communication: the customer; your organisation's structure; the disposal team

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that safe systems of work are in place
- approve and/or authorize disposal plans that are fit for purpose and meet the specified requirements
- agree deliverables with the customer, with interim reviews as appropriate
- communicate the plan, in accordance with organisational procedures
- allocate responsibilities appropriately
- respond to developing events and priorities, in accordance with procedures
- give clear and accurate technical advice
- record your decisions, actions and rationale, in accordance with your organisation's procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the disposal objectives
- how to assess hazards and mitigate risk
- how to adapt, design and validate disposal procedures
- the competences of the personnel involved
- the availability of resources and any constraints attached to them
- monitoring techniques
- who needs to be informed of the disposal plans, and the nature of their interest
- your own level of authority
- the relevant quality standards and compliance regime
- the factors vital to assuring quality

[CONTENTS PAGE](#)

## Unit 11.8 Carry out pre-disposal tasks for explosive substances and/or articles

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### Contexts

- Resources: people; equipment; consumables; services
- Disposal plan: where no changes are needed; where significant changes are needed<sup>2</sup>; where minor changes are needed<sup>3</sup>

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- allocate responsibilities appropriately
- confirm the availability and suitability of the equipment, consumables and services needed to complete the task
- ensure that any necessary tests of the equipment have been carried out correctly
- check that the work environment is suitable for the disposal task
- ensure that any necessary logistic arrangements are in place, in accordance with your organisation's procedures and the disposal plan
- confirm the fitness for purpose of the disposal plan, and make any necessary amendments in the light of changes required, within your level of authority
- obtain approval or authorisation for any necessary changes to the plan beyond your level of authority

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the disposal objectives
- the disposal plan, and its limitations
- the date, time and location of the disposal
- the way in which the disposal plan may need to be changed, and the process for doing so
- the competences of team members
- the equipment, consumables and services needed to complete the task
- your level of authority

[CONTENTS PAGE](#)

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<sup>2</sup> where referral to management is needed

<sup>3</sup> where changes may be made within the agreed level of authority

## **Unit 11.9 Contribute to pre-disposal tasks for explosive substances and/or articles**

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### **Contexts**

- Resources: equipment; consumables; services; work environment

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### **Performance Criteria**

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- confirm the serviceability of the equipment, consumables and services needed to complete the task
- carry out correctly any necessary tests of the equipment
- check that the work environment is suitable for the disposal task, as directed
- make any necessary logistic arrangements, as directed, in accordance with your organisation's procedures and the disposal plan
- contribute to the disposal plan (including the hazard and risk assessments)
- report problems beyond your level of authority to the appropriate person

### **Knowledge Requirements**

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the disposal plan, and your role in it
- the roles and responsibilities of team members
- the equipment, consumables and services needed to complete the task
- how to assemble, check and use the equipment
- why hazard and risk assessments are required, and your role in contributing to them
- reporting lines and procedures
- your level of authority

**[CONTENTS PAGE](#)**

## Unit 11.10 Dispose of explosive substances and/or articles by complex mechanical breakdown procedures

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### Contexts

- Level and extent of responsibility: completing complex tasks yourself; supervising other competent personnel engaged upon multiple or other inter-related tasks
- Complexity: of the procedure; the explosive substances and/or articles
- Types of components: explosive; other hazardous components

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that any stored energy or substances are released safely and correctly
- remove the required explosive substances and/or articles, using approved tools and techniques, in accordance with procedures
- take suitable precautions to prevent damage to components, tools and equipment during removal
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be broken down
- the actions to be taken in response to an unplanned event
- the disposal procedure(s), and the plan
- the safety constraints of mechanical breakdown
- relevant and alternative breakdown techniques and procedures
- types of breakdown equipment, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to breakdown (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- how to consign residues and other products for disposal
- clearance and remedial actions to be taken on completion of the breakdown

[CONTENTS PAGE](#)

## Unit 11.11 Dispose of explosive substances and/or articles by complex chemical breakdown procedures

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### Contexts

- Level and extent of responsibility: completing complex tasks yourself; supervising other competent personnel engaged upon multiple or other inter-related tasks
- Complexity: of the procedure; the explosive substances and/or articles
- Types of substances: explosive; other hazardous substances

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that any substances are released safely and correctly
- process the required substances, using approved equipment, chemicals and/or techniques, in accordance with procedures
- take suitable precautions to prevent unintended release during the process
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE) and COSHH
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be broken down
- the actions to be taken in response to an unplanned event
- the disposal procedure(s), and the plan
- the safety constraints of chemical breakdown
- relevant and alternative breakdown techniques and procedures
- types of breakdown equipment or chemicals, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to breakdown (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority, and of those with whom you work
- how to consign residues and other products for disposal
- clearance and remedial actions to be taken on completion of the disposal

[CONTENTS PAGE](#)

## Unit 11.12 Dispose of explosive substances and/or articles by complex biological breakdown procedures

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### Contexts

- Level and extent of responsibility: completing complex tasks yourself; supervising other competent personnel engaged upon multiple or other inter-related tasks
- Complexity: of the procedure; the explosive substances and/or articles
- Types of substances: explosive; other hazardous substances

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you and, where those under your control carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that any substances are released safely and correctly
- process the required substances using approved equipment, organisms and enzymes and/or techniques, in accordance with procedures
- take suitable precautions to prevent unintended release during the process
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of PPE and COSHH
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be broken down
- the actions to be taken in response to an unplanned event
- the disposal procedure(s), and the plan
- the safety constraints of biological breakdown
- relevant and alternative breakdown techniques and procedures
- types of breakdown equipment or organisms and enzymes and their application, capabilities and limitations
- procedures for calibration and authorization of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to breakdown (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- how to consign residues and other products for disposal
- clearance and remedial actions to be taken on completion of the disposal

[CONTENTS PAGE](#)

## Unit 11.13 Dispose of explosive substances and/or articles by complex burning procedures

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### Contexts

- Level and extent of responsibility: completing complex tasks yourself; supervising other competent personnel engaged upon multiple or other inter-related tasks
- Complexity: of the procedure; the explosive substances and/or articles
- Types of substances or articles: explosive; other hazardous materiel

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### Performance Criteria

You need to:

- a work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- b ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- c check that all preparatory work and all safety precautions have been carried out
- d ensure that any stored energy or substances are released safely and correctly
- e segregate and dispose of the process residues and products, in accordance with approved procedures
- f maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- i the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- ii the relevance of personal protective equipment (PPE)
- iii the nature, characteristics, hazards and risks of the explosive substances and/or articles to be burnt
- iv the actions to be taken in response to an unplanned event
- v the disposal procedures, and the plan
- vi the safety constraints of burning
- vii relevant and alternative burning techniques and procedures
- viii types of equipment relevant to the task, and their application, capabilities and limitations
- ix procedures for calibration and authorisation of equipment
- x special designated responsibilities (eg emergency response)
- xi environmental controls relating to burning (eg temperature, humidity)
- xii the reporting documentation to be used
- xiii the customer's objectives and needs
- xiv the competences of the personnel involved
- xv reporting lines and procedures
- xvi your own level of authority and of those with whom you work
- xvii how to consign residues and other products for disposal
- xviii clearance and remedial actions to be taken on completion of the disposal

[CONTENTS PAGE](#)

## Unit 11.14 Dispose of explosive substances and/or articles by complex incineration procedures

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### Contexts

- Level and extent of responsibility: completing complex tasks yourself; supervising other competent personnel engaged upon multiple or other inter-related tasks
- Complexity: of the procedure; the explosive substances and/or articles
- Types of substances or articles: explosive; other hazardous material

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that the incineration equipment continues to work correctly throughout the task
- ensure that any stored energy or substances are released safely and correctly
- take suitable precautions to prevent unintended release during the process
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be incinerated
- the actions to be taken in response to an unplanned event
- the disposal procedure(s), and the plan
- the safety constraints of incineration
- relevant and alternative incineration techniques and procedures
- types of equipment relevant to the task, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to incineration (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- clearance and remedial actions to be taken on completion of the disposal
- how to consign residues and other by-products for disposal

[CONTENTS PAGE](#)

## Unit 11.15 Dispose of explosive substances and/or articles by complex deflagration procedures

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### Contexts

- Level and extent of responsibility: completing complex tasks yourself; supervising other competent personnel engaged upon multiple or other inter-related tasks
- Complexity: of the procedure; the explosive substances and/or articles
- Types of substances or articles: explosive; other hazardous materiel

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that the deflagration equipment continues to work correctly throughout the task
- ensure that any stored energy or substances are released safely and correctly
- take suitable precautions to prevent unintended release during the process
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be deflagrated
- the actions to be taken in response to an unplanned event
- the disposal procedure(s), and the plan
- the safety constraints of deflagration
- relevant and alternative deflagration techniques and procedures
- types of equipment relevant to the task, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to deflagration (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- clearance and remedial actions to be taken on completion of the disposal
- how to consign residues and other products for disposal

[CONTENTS PAGE](#)

## Unit 11.16 Dispose of explosive substances and/or articles by complex detonation procedures

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### Contexts

- Level and extent of responsibility: completing complex tasks yourself; supervising other competent personnel engaged upon multiple or other inter-related tasks
- Complexity: of the procedure; the explosive substances and/or articles
- Types of substances or articles: explosive; other hazardous material

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### Performance Criteria

You need to:

- a work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- b ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- c check that all preparatory work and all safety precautions have been carried out
- d segregate and dispose of the process residues and products, in accordance with approved procedures
- e maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- i the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- ii the relevance of personal protective equipment (PPE)
- iii the nature, characteristics, hazards and risks of the explosive substances and/or articles to be detonated
- iv the actions to be taken in response to an unplanned event
- v the disposal procedure(s), and the plan
- vi the safety constraints of detonation
- vii relevant and alternative detonation techniques and procedures
- viii types of equipment relevant to the task, and their application, capabilities and limitations
- ix procedures for calibration and authorisation of equipment
- x special designated responsibilities (eg emergency response)
- xi environmental controls relating to detonation (eg temperature, humidity)
- xii the reporting documentation to be used
- xiii the customer's objectives and needs
- xiv the competences of the personnel involved
- xv reporting lines and procedures
- xvi your own level of authority and of those with whom you work
- xvii clearance and remedial actions to be taken on completion of the disposal
- xviii how to consign residues and other products for disposal

[CONTENTS PAGE](#)

## Unit 11.10A Dispose of explosive substances and/or articles by non-complex mechanical breakdown procedures

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### Contexts

- Level and extent of responsibility: completing non-complex tasks yourself; supervising other competent personnel engaged in completing non-complex tasks
- Types of components: explosive; other hazardous components

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that any stored energy or substances are released safely and correctly
- remove the required explosive substances and/or articles, using approved tools and techniques in accordance with procedures
- take suitable precautions to prevent damage to components, tools and equipment during removal
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation and control components, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be broken down
- the actions to be taken in response to an unplanned event
- the disposal procedure, and the plan
- the safety constraints of mechanical breakdown
- relevant and alternative breakdown techniques and procedures
- types of breakdown equipment, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to breakdown (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- how to consign residues and other products for disposal
- the competences of the personnel involved
- reporting lines and procedures
- how to communicate clear instructions
- your own level of authority and of those with whom you work

[CONTENTS PAGE](#)

## Unit 11.11A Dispose of explosive substances and/or articles by non-complex chemical breakdown procedures

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### Contexts

- Level and extent of responsibility: completing non-complex tasks yourself; supervising other competent personnel engaged in completing non-complex tasks
- Types of substances: explosive; other hazardous substances

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that any substances are released safely and correctly
- process the required substances, using approved equipment, chemicals and/or techniques, in accordance with procedures
- take suitable precautions to prevent unintended release during the process
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of PPE and COSHH
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be broken down
- the actions to be taken in response to an unplanned event
- the disposal procedure, and the plan
- the safety constraints of chemical breakdown
- relevant and alternative breakdown techniques and procedures
- types of breakdown equipment or chemicals, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to breakdown (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- how to consign residues and other products for disposal
- clearance and remedial actions to be taken on completion of the disposal

[CONTENTS PAGE](#)

## Unit 11.12A Dispose of explosive substances and/or articles by non-complex biological breakdown procedures

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### Contexts

- Level and extent of responsibility: completing non-complex tasks yourself; supervising other competent personnel engaged in completing non-complex tasks
- Types of substances: explosive; other hazardous substances

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that any substances are released safely and correctly
- process the required substances, using approved equipment, organisms and enzymes and/or techniques, in accordance with procedures
- take suitable precautions to prevent unintended release during the process
- segregate and dispose of the process residue and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of PPE and COSHH
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be broken down
- the actions to be taken in response to an unplanned event
- the disposal procedure, and the plan
- the safety constraints of biological breakdown
- relevant and alternative breakdown techniques and procedures
- types of breakdown equipment or organisms and enzymes, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to breakdown (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- how to consign residues and other products for disposal
- clearance and remedial actions to be taken on completion of the disposal

[CONTENTS PAGE](#)

## Unit 11.13A Dispose of explosive substances and/or articles by non-complex burning procedures

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### Contexts

- 1 Level and extent of responsibility: completing non-complex tasks yourself; supervising other competent personnel engaged in completing non-complex tasks
- 2 Types of substances or articles: explosive; other hazardous material

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### Performance Criteria

You need to:

- a work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- b ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- c check that all preparatory work and all safety precautions have been carried out
- d ensure that any stored energy or substances are released safely and correctly
- e segregate and dispose of the process residues and products, in accordance with approved procedures
- f maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- i the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- ii the relevance of personal protective equipment (PPE)
- iii the nature, characteristics, hazards and risks of the explosive substances and/or articles to be burnt
- iv the actions to be taken in response to an unplanned event
- v the disposal procedure, and the plan
- vi the safety constraints of burning
- vii relevant and alternative burning techniques and procedures
- viii types of equipment relevant to the task, and their application, capabilities and limitations
- ix procedures for calibration and authorisation of equipment
- x special designated responsibilities (eg emergency response)
- xi environmental controls relating to burning (eg temperature, humidity)
- xii the reporting documentation to be used
- xiii the customer's objectives and needs
- xiv the competences of the personnel involved
- xv reporting lines and procedures
- xvi your own level of authority and of those with whom you work
- xvii how to consign residues and other products for disposal
- xviii clearance and remedial actions to be taken on completion of the disposal

**[CONTENTS PAGE](#)**

## Unit 11.14A Dispose of explosive substances and/or articles by non-complex incineration procedures

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### Contexts

- Level and extent of responsibility: completing non-complex tasks yourself; supervising other competent personnel engaged in completing non-complex tasks
- Types of substances or articles: explosive; other hazardous material

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that the incineration equipment continues to work correctly throughout the task
- ensure that any stored energy or substances are released safely and correctly
- take suitable precautions to prevent unintended release during the process
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be incinerated
- the actions to be taken in response to an unplanned event
- the disposal procedure, and the plan
- the safety constraints of incineration
- relevant and alternative incineration techniques and procedures
- types of equipment relevant to the task, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to incineration (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- how to consign residues and other products for disposal
- clearance and remedial actions to be taken on completion of the disposal

[CONTENTS PAGE](#)

## Unit 11.15A Dispose of explosive substances and/or articles by non-complex deflagration procedures

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### Contexts

- Level and extent of responsibility: completing non-complex tasks yourself; supervising other competent personnel engaged in completing non-complex tasks
- Types of substances or articles: explosive; other hazardous material

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- ensure that the deflagration equipment continues to work correctly throughout the task
- ensure that any stored energy or substances are released safely and correctly
- take suitable precautions to prevent unintended release during the process
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be deflagrated
- the actions to be taken in response to an unplanned event
- the disposal procedure, and the plan
- the safety constraints of deflagration
- relevant and alternative deflagration techniques and procedures
- types of equipment relevant to the task, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to deflagration (eg temperature, humidity)
- deflagration reporting documentation
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- how to consign residues and other products for disposal
- clearance and remedial actions to be taken on completion of the disposal

**[CONTENTS PAGE](#)**

## Unit 11.16A Dispose of explosive substances and/or articles by non-complex detonation procedures

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### Contexts

- Level and extent of responsibility: completing non-complex tasks yourself; supervising other competent personnel engaged in completing non-complex tasks
- Types of substances or articles: explosive; other hazardous material

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- check that all preparatory work and all safety precautions have been carried out
- segregate and dispose of the process residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be detonated
- the actions to be taken in response to an unplanned event
- the disposal procedure, and the plan
- the safety constraints of detonation
- relevant and alternative detonation techniques and procedures
- types of equipment relevant to the task, and their application, capabilities and limitations
- procedures for calibration and authorisation of equipment
- special designated responsibilities (eg emergency response)
- environmental controls relating to detonation (eg temperature, humidity)
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- how to consign residues and other products for disposal
- clearance and remedial actions to be taken on completion of the disposal

[CONTENTS PAGE](#)

## Unit 11.17 Dispose of explosive substances and/or articles by function as intended procedures

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### Contexts

- Level and extent of responsibility: completing tasks yourself; supervising others completing tasks

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- ensure that you, and those under your control, carry out the disposal procedure and the plan correctly
- carry out all preparatory work and safety precautions
- take suitable precautions to prevent damage to equipment during disposal
- segregate and dispose of the residues and products, in accordance with approved procedures
- maintain documentation, in accordance with organisational procedures

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles to be disposed, and its firing platform
- the actions to be taken in response to an unplanned event
- the disposal procedures, and the plan
- procedures for the authorisation and use of equipment and location
- special designated responsibilities (eg emergency response)
- environmental controls relating to disposal
- the reporting documentation to be used
- the customer's objectives and needs
- the competences of the personnel involved
- reporting lines and procedures
- your own level of authority and of those with whom you work
- clearance and remedial actions on completion of the disposal
- how to consign residues and products for disposal

[CONTENTS PAGE](#)

## Unit 11.18 Contribute to the explosive substances and/or articles disposal task

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### Contexts

- Resources: equipment; consumables; services; work environment

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### Performance Criteria

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guideline
- carry out any final pre-disposal checks, as directed
- use the equipment, consumables and services correctly during the task
- maintain the work environment, as directed
- record data and information, as directed
- carry out the task, as directed
- report any problems beyond your level of authority to the appropriate person

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the disposal plan, the procedure, and your role in it
- the expected outcomes of the task
- the roles and responsibilities of team members
- the equipment, consumables and services needed to complete the task
- how to use the equipment
- reporting lines and procedures
- your level of responsibility

[\*\*CONTENTS PAGE\*\*](#)

## Unit 11.19 Carry out post-disposal tasks for explosive substances and/or articles

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### Contexts

- Resources: people; equipment; consumables; services
- Disposal plan: where no changes are needed; where significant changes are needed<sup>4</sup>; where minor changes are needed<sup>5</sup>

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### Performance Criteria

You need to:

- work safely at all times, complying with health & safety, environmental and other relevant regulations, legislation and guideline
- confirm that your disposal objectives have been met
- allocate tasks appropriately
- allocate the equipment, consumables and services needed to complete the post-disposal tasks
- ensure that the equipment is maintained, in accordance with your organisation's procedures
- ensure that the work environment has been appropriately remediated
- ensure that residues and products have been disposed of correctly
- ensure that the logistic arrangements for recovery have been carried out, in accordance with your organisation's procedures and the disposal plan
- write the post-disposal report, according to your organisation's procedures, highlighting your recommendations

### Knowledge Requirements

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the disposal plan and procedure(s)
- how to confirm that the disposal objectives have been met
- the actions you should take if the disposal objectives have not been met
- the roles and responsibilities of team members
- the importance of completing post-disposal tasks
- the purpose and format of the disposal report
- the procedures for disposing of residues and products, and any associated restrictions
- the condition in which the site must be left
- the equipment, consumables and services needed to complete post-disposal tasks
- reporting lines and procedures
- your level of authority and of those with whom you work

[CONTENTS PAGE](#)

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<sup>4</sup> ibid

<sup>5</sup> ibid

## **Unit 11.20 Contribute to post-disposal tasks for explosive substances and/or articles**

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### **Contexts**

- Resources: equipment; consumables; services; work environment

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### **Performance Criteria**

You need to:

- work safely at all times, complying with health and safety, environmental and other relevant regulations, legislation and guidelines
- carry out final post-disposal checks, as directed
- use the equipment, consumables and services correctly during post-disposal tasks
- maintain the equipment, in accordance with your organisation's procedures
- remediate the work environment, as directed, disposing of residues and products, within the limits of your responsibility
- report faulty equipment, in accordance with your organisation's procedures and/or the manufacturer's instructions
- report the data and information, as directed
- report any problems beyond your level of authority to the appropriate person

### **Knowledge Requirements**

You need to know and understand:

- the health, safety and environmental and other statutory legislation, regulations, safe working practices and procedures governing explosives, and their implications for your area of work
- the relevance of personal protective equipment (PPE)
- the nature, characteristics, hazards and risks of the explosive substances and/or articles
- the actions to be taken in response to an unplanned event
- the disposal plan, the procedure, and your role in it
- the roles and responsibilities of team members
- the importance of completing post-disposal tasks
- how to collect and dispose of residues and products
- the condition in which the site must be left
- the equipment, consumables and services needed to complete post-disposal tasks
- how to use, maintain and report faults in the equipment
- reporting lines and procedures
- your level of authority and of those with whom you work

**[CONTENTS PAGE](#)**