



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **CPPFES2048A Receive and dispatch scheduled gaseous fire-extinguishing agents**

**Release: 1**

## **CPPFES2048A Receive and dispatch scheduled gaseous fire-extinguishing agents**

### **Modification History**

Revised unit

Unit updated and equivalent to PRMPFES48A Receive and dispatch ozone depleting substance and synthetic greenhouse gas containers

### **Unit Descriptor**

This unit of competency specifies the outcomes required to receive containers of ozone depleting substances (ODS) and synthetic greenhouse gases (SGG) according to regulatory and workplace requirements. It includes identifying the workplace procedures and documentation requirements for receiving and dispatching ODS and SGG containers.

### **Application of the Unit**

This unit of competency supports fire protection technicians responsible for the receipt and dispatch of ODS and SGG containers, including checking, inspecting, loading and unloading, classifying, making safe, moving, storing and dispatching the containers, and completing required workplace documentation.

### **Licensing/Regulatory Information**

The unit supports one or more extinguishing agent handling licences (EAHL) prescribed under the Ozone Protection and Synthetic Greenhouse Gas Management Act 1989. Different states and territories may have regulatory mechanisms that apply to this unit. Candidates are advised to check for regulatory limitations.

### **Pre-Requisites**

Not applicable.

### **Employability Skills Information**

This unit contains employability skills.

## Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.

## Elements and Performance Criteria

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| 1 | Apply rules and regulations to receiving and dispatching ODS and SGG containers. | 1.1 | Requirements of relevant <b><i>rules and regulations</i></b> are <b><i>confirmed</i></b> and applied to <b><i>work procedures</i></b> .   |
|   |  | 1.2 | Knowledge of legislative and industry requirements relating to <b><i>ODS and SGG</i></b> emission is applied when receiving, storing and dispatching containers.  |
|   |  | 1.3 | Compliance requirements are checked and <b><i>action</i></b> is taken according to <b><i>organisational policies and procedures</i></b> , ODS, SGG and occupational health and safety (OHS) requirements. |
| 2 | Inspect and receive ODS and SGG containers.                                      | 2.1 | Work procedures for receiving <b><i>ODS and SGG containers</i></b> are identified and followed.   |
|   |  | 2.2 | Potential <b><i>hazards</i></b> and risks are identified.   |
|   |  | 2.3 | OHS <b><i>risk control measures</i></b> and procedures are followed.  |
|   |  | 2.4 | Personal protective equipment (PPE) is used correctly.  |
|   |  | 2.5 | <b><i>Containers</i></b> are checked against consignment documentation and <b><i>discrepancies</i></b> are identified.  |
|   |  | 2.6 | Mass of containers is weighed and recorded.   |
|   |  | 2.7 | Containers are received and <b><i>documentation</i></b> is completed according to work procedures.  |
| 3 | Classify received ODS and SGG containers.  | 3.1 | Types of ODS and SGG containers and their contents are identified.  |
|   |  | 3.2 | Containers are checked for <b><i>defects</i></b> .  |

- 3.3 Unusable containers are identified and condemned according to work procedures.
    - 3.4 **Condemned containers** are labelled, isolated and **made safe** according to work procedures.
- 4 Move and store ODS and SGG containers.
  - 4.1 **Manual-handling techniques and aids** are identified.
  - 4.2 Safe work procedures are used to unload, unpack, move and **store containers** in the workplace.
  - 4.3 Assistance from others is sought as necessary to maintain a safe and effective workplace.
  - 4.4 Documentation is completed according to work procedures.
- 5 Dispatch ODS and SGG containers.
  - 5.1 Containers are checked to confirm compliance with regulatory requirements for transport and storage.
  - 5.2 Containers are securely stored ready for dispatch.
  - 5.3 Leak detection tests are performed on stored containers to identify leaks.
  - 5.4 Containers are made safe according to work procedures and discovered leaks are reported.
  - 5.5 Containers are loaded and secured on transport vehicles.
  - 5.6 Documentation is completed according to work procedures.

## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

- customer service skills
- language, literacy and numeracy skills to:
  - communicate with others clearly and concisely, verbally and in writing
  - interpret temperature and pressure graphs for different agents to determine pressure at a given temperature
  - read and comply with work instructions and specifications
  - read and record measurements
  - record and report information neatly and legibly
- planning and organising skills to:
  - estimate time to complete activities
  - prioritise tasks
- interpersonal skills to relate to people from a range of social and cultural backgrounds
- skills to work safely when:
  - applying manual-handling techniques
  - applying workplace housekeeping procedures
  - identifying hazards in the work area in relation to receiving, classifying, moving, storing and dispatching ODS and SGG containers
  - selecting and using materials, tools and equipment, including PPE for specific tasks
- initiative and enterprise skills to select and use relevant communications records when receiving, classifying, moving, storing and dispatching ODS and SGG containers
- problem-solving skills to resolve problems in practical and safe ways, including assessing and selecting:
  - movement paths for transporting ODS and SGG containers in the workplace
  - safe working loads
- technical skills to:
  - check ODS and SGG containers for defects
  - condemn defective ODS and SGG containers
  - identify contents of ODS and SGG containers
  - label and isolate condemned ODS and SGG containers
  - make safe ODS and SGG containers according to work procedures
  - move dangerous goods and ODS and SGG containers safely in the workplace

### Required knowledge

- awareness of EAHL

- documentation used to receive, classify, move, store and dispatch ODS and SGG containers
- key features of legislation, regulations and codes applicable to receipt and dispatch of ODS and SGG containers
- relevant Australian standards, such as:
  - AS 4214 Gaseous fire extinguishing systems
  - ISO 14520 Gaseous fire-extinguishing systems – Physical properties and system design
- implications of:
  - ignoring safety precautions used with mechanical and manual-handling aids
  - incorrect manual-lifting techniques
- manual-handling techniques and aids applied to receiving and moving ODS and SGG containers
- methods used to:
  - isolate condemned containers
  - label condemned containers
  - make safe containers
  - prevent ODS and SGG emissions in the workplace
- principles and procedures related to receiving, classifying, moving, storing and dispatching stock
- reasons for preventing ODS and SGG emissions in the workplace
- site layout
- types of ODS and SGG containers, including materials stored in ODS and SGG containers
- relevant federal, state or territory legislation that affects organisational operations, including:
  - anti-discrimination and diversity
  - equal employment opportunity

## Evidence Guide

The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

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| Overview of assessment   | This unit of competency could be assessed by observation of practical demonstration of receipt and dispatch of ODS and SGG containers.   |
| Critical aspects for assessment and evidence required to demonstrate competency in this unit | <p>A person who demonstrates competency in this unit must be able to provide evidence of the required skills and knowledge specified in this unit.</p> <p>In particular the person should demonstrate the ability to:</p> <ul style="list-style-type: none"> <li>• communicate and work effectively and safely with others</li> <li>• comply with OHS regulations, ODS and SGG regulations (where required) and state and territory legislation applicable to workplace operations</li> <li>• comply with organisational policies and procedures, including quality requirements</li> <li>• locate, interpret and apply relevant information, standards and specifications</li> <li>• receive and dispatch ODS and SGG containers on a minimum of two different occasions and including:             <ul style="list-style-type: none"> <li>• identifying, selecting and using appropriate documentation to receive ODS and SGG containers into a work site</li> <li>• using tools, equipment and materials effectively to receive and move containers in a work site</li> <li>• using tools, equipment and materials effectively to dispatch containers from a work site</li> <li>• checking, inspecting, classifying and receiving containers and completing workplace documentation</li> <li>• labelling, isolating and storing condemned containers</li> <li>• making safe containers according to work procedures</li> <li>• creating and modifying workplace records and documentation</li> <li>• identifying hazards and risks at work site</li> <li>• using PPE</li> <li>• using manual-handling techniques and aids to transport and store containers</li> <li>• selecting and using workplace communication technologies and language in the workplace, including technical language.</li> </ul> </li> </ul> |
| Context of and specific resources for assessment   | Assessment of essential underpinning knowledge may be conducted in an off-site context. It is to comply with relevant regulatory or  |

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|  | <p>Australian standards' requirements.</p> <p>Resource implications for assessment include:</p> <ul style="list-style-type: none"><li>• actual or simulated work environment</li><li>• assessment documentation, including training and assessment record books</li><li>• necessary safety equipment and PPE</li><li>• necessary tools, equipment and materials</li><li>• range of ODS and SGG containers with different contents, including damaged and faulty containers</li><li>• relevant procedure manuals and receiving documentation.</li></ul> |
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| Method of assessment                | <p>Assessment methods must:</p> <ul style="list-style-type: none"> <li>• satisfy the endorsed Assessment Guidelines of the Property Services Training Package</li> <li>• include direct observation of tasks in real or simulated work conditions, with questioning to confirm the ability to consistently identify and correctly interpret the essential underpinning knowledge required for practical application</li> <li>• reinforce the integration of employability skills with workplace tasks and job roles</li> <li>• confirm that competency is verified and able to be transferred to other circumstances and environments.</li> </ul> |
| Guidance information for assessment | <p>Reasonable adjustments for people with disabilities must be made to assessment processes where required. This could include access to modified equipment and other physical resources, and the provision of appropriate assessment support.</p> <p>Assessment processes and techniques should as far as is practical take into account the language, literacy and numeracy capacity of the candidate in relation to the competency being assessed.</p> <p>This unit could be assessed on its own or in combination with other units relevant to the job function.</p>  |

## Range Statement

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

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| <p><b><i>Rules and regulations</i></b> may include:</p> | <ul style="list-style-type: none"> <li>• dangerous goods regulations</li> <li>• environmental regulations</li> <li>• licensing arrangements</li> <li>• OHS legislation, regulations and codes</li> <li>• relevant commonwealth and state or territory building Acts, regulations and codes, such as Building Code of Australia (BCA)</li> <li>• relevant standards, such as: <ul style="list-style-type: none"> <li>• AS 1851 Maintenance of fire protection systems and equipment</li> <li>• AS 4214 Gaseous fire extinguishing systems</li> <li>• ISO 14520 Gaseous fire-extinguishing systems – Physical properties and system design</li> </ul> </li> </ul> |
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|  | <ul style="list-style-type: none"><li>• note: Australian standards are frequently revised and users must always check for currency and amendments</li><li>• other relevant legislation relating to fire protection equipment, including:<ul style="list-style-type: none"><li>• international shipping codes</li><li>• marine codes for different Australian States</li><li>• requirements of Australian petroleum industry.</li></ul></li></ul> |
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| <p>Requirements may be <i>confirmed</i> with:</p>  | <ul style="list-style-type: none"> <li>• colleagues</li> <li>• managers</li> <li>• supervisors</li> <li>• team leaders.</li> </ul>   |
| <p><i>Work procedures</i> may include:</p>   | <ul style="list-style-type: none"> <li>• assignment instructions</li> <li>• equipment manufacturers' requirements</li> <li>• instructions from colleagues, supervisors and managers</li> <li>• manual-handling techniques</li> <li>• ODS, SGG and OHS requirements</li> <li>• PPE requirements</li> <li>• reporting and documentation requirements</li> <li>• specific customer requirements.</li> </ul>   |
| <p><i>ODS and SGG extinguishing agents</i> may include:</p> <p>Note list format: product name (other names) use</p> <p>Check the latest amendments to the Ozone Protection and Synthetic Greenhouse Gas Management Act for the current list of ODS and SGG extinguishing agents.</p> | <ul style="list-style-type: none"> <li>• ODS and SGG extinguishing agents <b>commonly</b> used in Australia: <ul style="list-style-type: none"> <li>• FM200 (FE-227 Heptafluoropropane, HFC-227ea) used as a total flooding extinguishing agent and as a replacement for Halon 1301</li> <li>• Halon 1211 (BCF, Halon 1211 BCF, Bromochlorodifluoromethane) used as a streaming agent – requires a special permit in Australia</li> <li>• Halon 1301 (BTM, Halon 1301 BTM, Bromotrifluoromethane) used as a total flooding agent – requires a special permit in Australia</li> <li>• NAF-P-III (HCFC Blend C) used as a streaming agent</li> <li>• NAF-P-IV (HCFC Blend E) used as a streaming agent</li> <li>• NAF-S-III (HCFC Blend A) used as a total flooding agent</li> <li>• SF6 (Sulfurhexafluoride) used as an inerting agent in sealed high voltage switchgear</li> </ul> </li> <li>• ODS and SGG extinguishing agents <b>not commonly</b> used in Australia: <ul style="list-style-type: none"> <li>• Blitz III (HCFC Blend D) used in flooding systems</li> <li>• CFC-11 (Trichlorofluoromethane) may be found as a propellant in some powder fire extinguishers (this product is banned in Australia but may be found on incoming foreign vessels)</li> <li>• FC-2-1-8 (CEA-308) used in flooding systems</li> <li>• FC-3-1-10 (CEA-410) used in flooding systems</li> <li>• FC-5-1-14 (CEA-614) used as a streaming agent</li> <li>• FE-13 (Trifluoromethane, HFC-23) used as a total flooding agent</li> <li>• FE-241 (Chlorotetrafluoroethane, HCFC-124) used as a total flooding agent for non-occupied spaces and as a streaming</li> </ul> </li> </ul> |

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|  | <p>agent</p> <ul style="list-style-type: none"><li>• FE-25 (Pentafluoroethane, HFC-125) used in inerting and explosion suppression applications</li><li>• FE-36 (Hexafluoropropane, HFC-236fa) used in portable fire extinguishers – is a replacement for Halon 1211 and Halon 1301</li><li>• FM100 (HBFC-22B1) used in portable fire extinguishers</li><li>• Halon 2402 (Dibromotetrafluoroethane) limited use in military systems – requires a special permit in Australia</li><li>• Halotron I (HCFC Blend B or HCFC-123) used as a total flooding agent and streaming agent</li><li>• Halotron II (blend of HFC-143a and HFC-125) used as a total flooding agent and as a replacement for Halon 1301</li><li>• HCFC-22 (Chlorodifluoromethane) used as a propellant in some powder fire extinguishers (this product is banned in Australia but may be found on incoming foreign vessels)</li><li>• HFC-134a (Unsymmetric tetrafluoroethane) used as a propellant in some powder fire extinguishers.</li></ul> |
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| <b>Action</b> may include:                                 | <ul style="list-style-type: none"> <li>• advising customer</li> <li>• documenting non-compliance</li> <li>• making equipment safe</li> <li>• reporting, as required.</li> </ul>  |
| <b>Organisational policies and procedures</b> may include: | <ul style="list-style-type: none"> <li>• job scheduling systems and communication devices</li> <li>• personnel practices and guidelines outlining work roles, responsibilities and delegations</li> <li>• procedures and work instructions to prevent emission of ODS and SGG in the workplace</li> <li>• recording and reporting documentation and systems</li> <li>• relevant OHS policies, procedures and programs</li> <li>• relevant rules and regulations</li> <li>• standard operating procedures, work instructions and manuals.</li> </ul>                                      |
| <b>ODS and SGG containers</b> may be identified by:        | <ul style="list-style-type: none"> <li>• colour and markings of container</li> <li>• container label: <ul style="list-style-type: none"> <li>• chemical name</li> <li>• country of origin</li> <li>• product name</li> </ul> </li> <li>• size and shape of container</li> <li>• type of container: <ul style="list-style-type: none"> <li>• hand-held fire extinguishers</li> <li>• pressure vessels, such as half tonne storage vessels</li> <li>• system.</li> </ul> </li> </ul>   |
| <b>Hazards</b> may include:                                | <ul style="list-style-type: none"> <li>• ergonomic, such as incorrect manual-handling methods</li> <li>• environmental, such as improper use of ODS and SGG or hazardous materials</li> <li>• obstructive, such as blocked access to emergency entry or exit points</li> <li>• hazards associated with electrical or mechanical faults</li> <li>• any situation with a potential to cause loss</li> <li>• any source of potential harm</li> <li>• equipment in a work site</li> <li>• people in a work site</li> <li>• work methods, plans, procedures and work instructions.</li> </ul> |
| <b>Risk control measures</b> may include:                  | <ul style="list-style-type: none"> <li>• hierarchy of control preferred order of control measures for risks: <ul style="list-style-type: none"> <li>• elimination of hazard: controlling the hazard at source</li> <li>• substitution of hazard: for example, replacing one substance or activity with a less hazardous one</li> <li>• engineering solution to hazard: for example, installing safety guards on machinery</li> </ul> </li> </ul>   |

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|  | <ul style="list-style-type: none"><li>• administration solution to hazard: policies and procedures directed at safe work practices</li><li>• PPE solution to hazard: for example, gloves or safety boots.</li></ul> |
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| <p><b>Containers</b> may be checked for:</p>    | <ul style="list-style-type: none"> <li>• appropriate dangerous goods declarations and markings, where applicable</li> <li>• appropriate material safety data sheets (MSDS), where applicable</li> <li>• condition</li> <li>• labelling</li> <li>• quantity of containers</li> <li>• type.</li> </ul>  |
| <p><b>Discrepancies</b> may include:</p>        | <ul style="list-style-type: none"> <li>• damaged ODS and SGG containers</li> <li>• errors in paperwork</li> <li>• incorrect quantity of containers received</li> <li>• wrong containers received.</li> </ul>  |
| <p><b>Documentation</b> may include:</p>        | <ul style="list-style-type: none"> <li>• Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances</li> <li>• codes of practice and regulations relevant to receiving goods</li> <li>• condemned ODS and SGG container reports</li> <li>• corrective action reports</li> <li>• customer or supplier instructions</li> <li>• dangerous goods declarations</li> <li>• emergency procedures</li> <li>• equipment manufacturers' specifications</li> <li>• goods identification numbers and codes</li> <li>• job cards</li> <li>• MSDS</li> <li>• ODS and SGG container classification reports</li> <li>• quality assurance procedures</li> <li>• receiving and dispatching documentation</li> <li>• receiving record system</li> <li>• service agreements</li> <li>• workplace procedures and policies.</li> </ul> |
| <p>Container <b>defects</b> may include:</p>    | <ul style="list-style-type: none"> <li>• faulty gauges</li> <li>• incorrectly capped or pinned container heads</li> <li>• leaking seals and gaskets</li> <li>• leaking seams</li> <li>• physical damage</li> <li>• rust or corrosion.</li> </ul>  |
| <p><b>Condemned containers</b> may include:</p> | <ul style="list-style-type: none"> <li>• containers with faulty gauges</li> <li>• damaged or faulty container heads</li> <li>• incorrectly capped or pinned container heads</li> <li>• leaking containers</li> <li>• physically damaged containers.</li> </ul>  |

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| <b><i>Making safe</i></b> unplugged or uncapped ODS and SGG containers may include: | <ul style="list-style-type: none"> <li>• replacing locking pins</li> <li>• fitting transport, discharge and actuation caps.</li> </ul>   |
| <b><i>Manual-handling techniques and aids</i></b> may include:                      | <ul style="list-style-type: none"> <li>• aids: <ul style="list-style-type: none"> <li>• hand trucks</li> <li>• hooks</li> <li>• lifting magnets</li> <li>• lifting straps</li> <li>• mechanical-handling aids, including: <ul style="list-style-type: none"> <li>• cranes</li> <li>• hoists</li> <li>• forklifts</li> <li>• pallet trucks</li> </ul> </li> <li>• suction grips</li> <li>• trolleys</li> <li>• wheelbarrows</li> </ul> </li> <li>• techniques: <ul style="list-style-type: none"> <li>• carrying</li> <li>• lifting</li> <li>• pulling</li> <li>• pushing.</li> </ul> </li> </ul> |
| <b><i>Storing containers</i></b> may include:                                       | <ul style="list-style-type: none"> <li>• caged storage facility</li> <li>• protection from harm</li> <li>• secure storage</li> <li>• stable location</li> <li>• upright position.</li> </ul>   |

## Unit Sector(s)

Fire protection equipment

## Custom Content Section

Not applicable.