



Australian Government

Department of Education, Employment and Workplace Relations

PRMPFES50A Monitor storage operations for ozone depleting substances and synthetic greenhouse gases

Release: 1

PRMPFES50A Monitor storage operations for ozone depleting substances and synthetic greenhouse gases

Modification History

Not Applicable

Unit Descriptor

Unit descriptor

This unit of competency specifies outcomes required to monitor and control minor environmental hazards and security incidents. In particular, the unit covers monitoring storage operations for environmental emissions and identifying detected emissions, identifying hazards within a monitored area and assessing the risk of identified hazards. It also covers monitoring storage operations security systems and identifying security incidents; measuring, controlling and reporting environmental hazards and security incidents; responding to identified emissions and security incidents; and participating in investigations of detected emissions and security incidents with internal and external regulatory bodies.

Note: The unit covers recognising and controlling environmental hazards and security incidents. It does **not** include the control of **significant** incidents which are either part of emergency response competencies or the role of management personnel.

Application of the Unit

Application of the unit

This unit of competency supports one or more extinguishing agent handling licences prescribed under the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989*.

Licensing/Regulatory Information

Not Applicable

Pre-Requisites

Prerequisite units

The following units of competency must be assessed prior to this unit:

- PRMPFES03C *Safely move materials and loads in the workplace*
- PRMPFES43A *Prevent ozone depleting substance and synthetic greenhouse gas emissions.*
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Employability Skills Information

Not Applicable

Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.

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

Elements and Performance Criteria

ELEMENT

PERFORMANCE CRITERIA

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|--|--|
| 1 Interpret and comply with legal and industry requirements to monitor environmental and security needs. | 1.1 Apply knowledge and understanding of legal and industry requirements to work procedures and clarify where necessary with relevant persons .
1.2 Apply knowledge and understanding of ozone depleting substance (ODS) and synthetic greenhouse gas (SGG) extinguishing agent legal and industry requirements to monitor environmental and security needs of ODS and SGG storage containers.
1.3 Identify potential and actual breaches of legal and industry requirements and take action according to organisational requirements and ODS, SGG and occupational health and safety (OHS) policies and procedures . |
| 2 Identify hazards in monitored area. | 2.1 Identify and recognise potential hazards in storage area.
2.2 Assess leak detection equipment and security systems to identify hazards presented by leak detection and security monitoring procedures.
2.3 Identify type and scope of unresolved hazards and their likely impact. |
| 3 Assess risk of identified hazard. | 3.1 Evaluate risk and determine level of risk.
3.2 Identify actions , consider options to eliminate or minimise risk, and refer to relevant persons .
3.3 Apply safety information and procedures throughout the operation.
3.4 Implement course of action to eliminate or minimise the risk. |
| 4 Monitor ODS and SGG emission detection. | 4.1 Identify leak detection test equipment and emission detection system components.
4.2 Interpret emission detection system information.
4.3 Identify causes or sources of detected emissions.
4.4 Take action to respond to detected emissions.
4.5 Participate in investigations of detected emissions.
4.6 Recommend improvements to emission detection system.
4.7 Complete documentation according to work |

ELEMENT	PERFORMANCE CRITERIA <i>procedures.</i>
5 Perform leak detection test.	5.1 Perform leak detection test on storage container, connections, valves and gauges. 5.2 Monitor and identify changes in storage container pressure. 5.3 Take action to address identified storage container leakage. 5.4 Complete documentation according to work procedures.
6 Track and audit storage container movements.	6.1 Schedule audits to minimise disruption to the workplace. 6.2 Audit storage container movements according to work procedures. 6.3 Record movements of storage containers and other audit requirements using appropriate workplace documentation. 6.4 Update record management system. 6.5 Create non-compliance reports, including options for system improvements, and forward to relevant persons.
7 Monitor storage container security.	7.1 Identify security system components. 7.2 Interpret security system information. 7.3 Identify causes or sources of detected security incidents. 7.4 Take action to respond to detected security incidents. 7.5 Participate in investigations of detected security incidents. 7.6 Recommend improvements to security system according to work procedures. 7.7 Complete documentation according to work procedures.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the essential skills and knowledge and their level, required for this unit.

Required skills:

- assess movement paths for transporting and storing ODS and SGG storage containers
- move and store ODS and SGG storage containers safely
- access, interpret and communicate operational hazard-related information
- identify hazards in the work environment, including ODS and SGG emissions
- assess environmental risks and security incidents

- determine risk level of hazard and take action to eliminate or minimise the risk
- complete risk management process records and reports
- interpret emission detection and security monitoring data
- identify emission and security incidents
- identify causes or sources of detected emissions or security incidents and select appropriate action
- undertake leak detection testing of ODS and SGG storage containers
- measure pressure of ODS and SGG storage containers
- interpret temperature and pressure graphs for different agents to determine pressure at a given temperature
- take action to address storage containers that cannot hold a steady pressure
- schedule and audit storage container movements
- record storage container movements
- update data in a record management system
- prepare non-compliance reports that include issues of non-compliance and provide suggestions for improvements
- select and use relevant personal protective equipment (PPE)
- investigate detected emissions and security incidents, and make recommendations for improvements
- select and safely use tools, equipment and materials appropriate to a specific task
- apply correct manual handling techniques
- solve problems in practical and safe ways
- select and use relevant communications and computing equipment when storing and moving ODS and SGG storage containers
- plan and organise work in order to estimate time to complete activities and prioritise tasks
- use effective customer service skills and relate to people from a range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities
- apply language, literacy and numeracy skills to:
 - communicate with others in a clear and concise manner in verbal, non-verbal and written modes
 - read, understand and comply with work instructions and specifications
 - read, understand and record measurements
 - read, interpret, apply and communicate technical information, rules and procedures
 - report and record information neatly and legibly when completing documentation.

Required knowledge:

- key features of legislation, regulations and codes applicable to monitoring and storage of ODS and SGG in storage containers
- action to take when a breach of OHS, ODS and SGG or other policies occurs
- different types of containers used for storage of ODS and SGG materials
- different types of labels, numbers and codes used on ODS and SGG storage containers
- personal risk assessment and control processes (hazard identification through to action)
- emission detection and security monitoring data
- methods of leak detection testing
- implications of ignoring safety precautions used with emission monitoring, security incident identification and audit processing of storage containers
- reasons for preventing ODS and SGG emissions in the workplace
- methods used to prevent ODS and SGG emissions in the workplace

- types of materials found in ODS and SGG storage containers
- correct manual handling aids and techniques
- workplace documentation used for emission and security monitoring, emission detection and security incident reporting and audit processing of storage container movements
- causes of emissions from ODS and SGG storage containers
- causes of security incidents related to ODS and SGG storage containers
- methods of investigating detected emissions and security incidents
- relevant federal, state or territory legislation that affects organisational operations, including:
 - anti-discrimination and diversity
 - equal employment opportunity
 - industrial relations.

KEY COMPETENCIES

The seven key competencies represent generic skills considered necessary for effective participation by an individual in the workplace.

Performance level 1 - at this level the candidate is required to undertake tasks effectively.

Performance level 2 - at this level the candidate is required to manage tasks.

Performance level 3 - at this level the candidate is required to use concepts for evaluating and reshaping tasks.

Key competency	Example of application	Performance level
How are ideas and information communicated?	Resolve detected emissions with relevant persons.	2
How can information be collected, analysed and organised?	Collect information regarding detected emissions and analyse against relevant policies and procedures.	2
How are activities planned and organised?	Organise work tasks according to safe work practices while mindful of regulatory framework.	2
How is teamwork used?	Contribute to a safe work environment.	1
How are mathematical ideas and techniques used?	Measure storage container pressures and record using correct units of pressure.	1
How are problem-solving skills applied?	Identify and report detected emissions and display initiative to identify problems.	2
How is the use of technology applied?	Interpret monitoring data for detected emissions and decide what actions to take.	2

Evidence Guide

EVIDENCE GUIDE

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

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|---|--|
| Overview of assessment | <ul style="list-style-type: none">• Competency in this unit underpins competency in other aspects of the candidate's role in managing their work tasks.• This unit could be assessed on its own or in combination with other units of competency relevant to the job function. |
| Critical aspects for assessment and evidence required to demonstrate competency in this unit | <ul style="list-style-type: none">• A person who demonstrates competency in this unit must be able to provide evidence of:<ul style="list-style-type: none">• locating, interpreting and applying relevant information, standards and specifications• complying with site safety plan, OHS regulations, ODS and SGG regulations (where required) and state and territory legislation applicable to workplace operations• complying with organisational policies and procedures, including quality requirements• communicating and working effectively and safely with others• on a minimum of two different occasions:<ul style="list-style-type: none">• identifying, selecting and using appropriate documentation to monitor and audit detected emissions and security incidents for storage containers• using tools, equipment and materials effectively to complete monitoring and auditing processes• performing leak detection test on storage container connections, valves and pipework• monitoring storage container pressure• repairing and topping up storage containers found to be losing pressure• transporting and storing storage containers• creating, modifying and updating workplace records and documentation• identifying risks and hazards at work site• assessing risks and implementing action to eliminate or minimise risk• using appropriate PPE and manual handling techniques and aids |

- selecting and using appropriate workplace colloquial and technical language and communication technologies.

Specific resources for assessment

- Resource implications for assessment include access to:
 - actual or simulated work environment
 - a range of containers to be used to store different ODS and SGG materials
 - assessment documentation, including training and assessment record books
 - all necessary tools, equipment and materials
 - relevant procedure manuals
 - monitoring and audit documentation
 - all necessary safety equipment and PPE.
- Where applicable, physical resources should include equipment modified for people with disabilities.
- Access must be provided to appropriate learning and/or assessment support when required.
- Assessment processes and techniques must be culturally appropriate, and appropriate to the oracy, language and literacy capacity of the candidate and the work being performed.

Context of assessment

- For valid and reliable assessment of this unit, competency should be demonstrated over a period of time and be observed by the assessor (or assessment team working together to conduct the assessment).
- Competency is to be demonstrated in a range of situations, reflecting the practical requirements of the workplace which may include customer and workplace interruptions and involvement in related activities normally experienced in the workplace.
- Assessment of competency over the full range of performance criteria may be made through practical demonstrations in the workshop environment. Consideration should be given to assessing consistency of outcome over an appropriate period of time.
- Candidates should also be given the opportunity to practise and undertake self-assessment of performance before requesting formal assessment.
- All safety requirements must be adhered to during all practical activities.
- Oral questioning or a written assessment may be used to assess underpinning knowledge. (In assessment situations, where the candidate is offered a preference between oral questioning and written assessment, questions are to be identical.)
- Assessment of evidence should establish the

candidate's ability to perform the job to the standard required in the workplace.

- Supplementary evidence may be obtained from relevant authenticated correspondence or reports from supervisors or team leaders that demonstrate an understanding of the requirements for monitoring and auditing detected emissions and security incidents related to ODS and SGG storage containers.
- Candidate should be encouraged to compile a portfolio of examples of completed documentation relevant to the candidate's organisation. One accurate example of each completed document is suggested as sufficient to infer competency and ability to transfer appropriate skills to each document type when required in the workplace. (Oral questioning may contribute as evidence of this ability.)
- Information derived from enterprise policies and practices must be treated as commercial-in-confidence.
- In all cases where practical assessment is used it will be combined with targeted questioning to assess the underpinning knowledge.
- Questioning will be undertaken in such a manner as is appropriate to the oracy, language and literacy levels of the candidate and any cultural issues that may affect responses to the questions. It will reflect requirements of the unit of competency and the work being performed.
- Where assessment is for the purpose of recognition (RCC or RPL), the evidence provided will need to be authenticated and show that it represents current competency demonstrated over a period of time.
- Performance and assessment of this unit must be carried out within the relevant requirements of the following legislative and industry framework:
 - Acts, regulations and codes
 - Australian and international standards identified as relevant to the monitoring and control of minor environmental hazards and security incidents
 - regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
 - relevant codes and regulations for storing ODS and SGG materials
 - licensing arrangements
 - environmental regulations, including ODS and

- SGG legislation, codes and regulations
- organisational requirements, including policies and procedures relating to ODS, SGG and OHS
- OHS legislation, codes and regulations
- emergency policies and procedures
- manufacturer specifications.

Range Statement

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 in the performance criteria is detailed below. Add any 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.

Legal and industry requirements may include:

- relevant current Australian standards, including AS 2030 and AS 4360
 - relevant federal, state and territory building Acts, regulations and codes
 - fire protection industry codes of practice
 - OHS legislation, codes and regulations
 - regulations and codes of practice for the handling and storage of dangerous goods and hazardous substances
 - relevant licensing or permit requirements and associated regulations
 - environmental regulations, including ODS and SGG legislation, codes and regulations, such as *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989*
 - relevant licence or permit requirements and associated regulations
 - material safety data sheets (MSDS)
 - other relevant legislation relating to ODS and SGG storage containers, including international, shipping and marine codes
 - Australian petroleum industry requirements.
- Work procedures*** may include:
- instructions from colleagues, supervisors and managers
 - workplace operating procedures, instructions and policies
 - specific customer requirements

- emergency requirements and instructions
- audit instructions
- equipment manufacturer requirements and specifications
- reporting and documentation requirements
- ODS, SGG and OHS requirements
- manual handling techniques
- PPE requirements.

Relevant persons may include:

- team leaders
- supervisors
- managers
- colleagues
- customers.

ODS and SGG materials are listed using the format: Product name (other names); use. Check the latest amendments to the *Ozone Protection and Synthetic Greenhouse Gas Management Act* for the current list of *ODS and SGG extinguishing agents* which may include:

- **Blitz III** (HCFC Blend D); used in flooding systems
- **CFC 11** (trichlorofluoromethane, CCl₃F); may be found as a propellant in some powder fire extinguishers (this product is banned in Australia)
- **FC-2-1-8** (CEA-308, CF₃CF₂CF₃); used in flooding systems
- **FC-3-1-10** (CEA-410, C₄F₁₀); used in flooding systems
- **FC-5-1-14** (CEA-614, C₆F₁₄); used as a streaming agent
- **FE-227** (heptafluoropropane, HFC-227ea); used as a total flooding extinguishing agent - is a replacement for Halon 1301
- **FE-25** (pentafluoroethane, HFC-125); used in inerting and explosion suppression applications and retro-fit to existing Halon 1301 systems
- **FE-36** (hexafluoropropane, HFC-236fa); used in portable fire extinguishers - is a replacement for Halon 1211 and Halon 1301
- **FE-13** (trifluoromethane, HFC-23); used as a total flooding agent
- **FE-241** (chlorotetrafluoroethane, HCFC-124); used as a total flooding agent for non-occupied spaces and as a streaming agent
- **FM100®** (HBFC-22B1); used in portable fire extinguishers
- **FM200®** (heptafluoropropane, HFC-227ea); used in chemical storage areas, clean rooms, communications facilities, laboratories, museums, robotics and emergency power facilities
- **Halotron** (HCFC Blend B); used as a total flooding agent and streaming agent
- **Halon 1211** (BCF); used as a streaming agent - requires a special permit in Australia
- **Halon 1301** (BTM); used as a total flooding agent - requires a special permit in Australia
- **Halon 2402** (dibromotetrafluoroethane, C₂Br₂F₄); limited use in military systems - requires a special permit in Australia
- **HCFC 22** (chlorodifluoromethane, CHClF₂); used as a propellant in some powder fire extinguishers (this product is banned in Australia)
- **HFC 134a** (unsymmetric tetrafluoroethane, CH₂FCF₃); used as a propellant in some powder

fire extinguishers

- **NAF-S-III** (HCFC Blend A); used as a total flooding agent - is a replacement for Halon 1301
- **NAF-P-III** (HCFC Blend C); used as a streaming agent - is a replacement for Halon 1211
- **NAF-P-IV** (HCFC Blend E); used as a streaming agent
- **SF6** (sulfurhexafluoride, SF₆); used as an inerting agent for sealed high voltage switchgear.

Potential and actual breaches
could be identified by:

- direct observation
- workplace quality assurance teams.

Organisational requirements
may include:

- legal and organisational policies and guidelines
- personnel practices and guidelines outlining work roles, responsibilities and delegations
- legislation relevant to warehouse operations
- emergency policies, procedures and instructions
- OHS policies, procedures and programs
- procedures and work instructions to prevent the emission of ODS and SGG in the workplace
- documentation and information systems and processes
- audit policies and procedures
- use of electronic job scheduling and communication devices.

OHS policies and procedures
may include:

- employer and employee rights and responsibilities
- the OHS hierarchy of control
- assessing the work site for hazards and risks prior to preparing it for the work procedure
- displaying signs and using barriers in work area
- hazard and risk identification and reporting
- risk assessment and control measures
- incident and accident investigation
- OHS audits and safety inspections
- safe operating procedures and instructions, including:
 - working safely around electrical wiring, cables and overhead powerlines
 - working safely around tools and equipment
 - working safely on ladders and raised platforms
 - risk and hazard recognition
 - emergency procedures
 - awareness of electrical hazards
 - following confined spaces procedures
 - using PPE, including:
 - safety glasses or goggles
 - safety boots or shoes
 - hard hats
 - earmuffs or plugs
 - appropriate gloves and overalls

- sunhats
- dust masks
- equipment maintenance and use
- use and storage of hazardous substances
- first aid.

- Security systems** may include:
- cages with locks
 - fencing
 - storage container padlocks
 - 'bonded' storage
 - security guards
 - electronic surveillance equipment, including:
 - infra-red beams
 - ultrasonic movement detectors
 - closed circuit television.
- Actions** may include:
- those that are to be 'first response' type
 - making safe unplugged or uncapped ODS and SGG containers, including:
 - replacing pins
 - using relevant sealant to seal leaking containers
 - activating environmental or security alarms, where appropriate
 - controlling or containing environmental hazards or security incidents according to workplace procedures
 - following approved safety procedures and using PPE as specified in workplace procedures
 - monitoring and measuring, where needed, detected emissions or security incidents according to workplace procedures
 - responding to requests for information according to workplace procedures
 - monitoring status of the environmental hazards or security incidents and communicating with appropriate personnel on an ongoing basis.
- Safety information and procedures** may be contained in:
- legislation and regulations
 - relevant Australian standards, such as AS 4360
 - management plans and rules
 - OHS policies and procedures
 - procedures and instructions to prevent the emission of ODS and SGG in the workplace
 - codes of practice
 - manufacturer instructions
 - safe working or job procedures (or equivalent standard operating procedures).
- Leak detection tests:**
- must be performed in accordance with relevant, current Australian standards, organisational requirements and environmental regulations, such

as ODS and SGG

- may be performed using:
 - hand-held devices
 - leak test solutions
 - pressure valves (to determine if container can hold pressure)
 - ultrasonic liquid level indicator devices
- may be performed on:
 - container connections, valves and gauges
 - connecting pipework and valves.

Investigations may include:

- making verbal, written or electronic reports about emission hazards or security incidents
- cooperating with internal and external regulatory bodies
- identifying solutions and developing options for improvements.

Documentation may include:

- audit records and reports
- incident reports
- investigation reports
- goods identification numbers and codes
- Australian and international regulations and codes of practice for the handling and transport of dangerous goods and hazardous substances
- dangerous goods declarations
- MSDS
- quality assurance plans and procedures
- emergency procedures
- equipment manufacturer specifications
- workplace procedures and policies
- job cards
- customer and supplier instructions
- service agreements
- corrective action reports
- record management system.

Non-compliance may include:

- corrosion or damage to container, connections and pipework
- disconnection of monitoring equipment or components
- malfunctioning or faulty monitoring system equipment and components
- incorrect or incomplete information or documentation

- missing documentation
- documentation signed by unauthorised personnel.

Unit Sector(s)

Sector

Fire Protection Equipment

Competency field

Competency field

Asset Maintenance