Fire Protection Industry
(ODS & SGG) Board

Ozone Depleting Substances and Synthetic Greenhouse Gases (ODS and SGG) Good Practice Guide

For the reduction of emissions of ozone depleting substances and synthetic greenhouse gases used in the fire protection industry

This Good Practice Guide is applicable to all fire suppression system practitioners and companies who handle or trade in extinguishing agents described in Schedule One of the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989*

Acknowledgement

The assistance provided by FPA Australia (via members of its Technical Advisory Committees), staff of the National Halon Bank and other industry representatives in producing this Good Practice Guide is gratefully acknowledged.

The Fire Protection Industry (ODS & SGG) Board would also like to thank members of FPA Australia's Technical Advisory Committees and the National Halon Bank for supplying images used within the Good Practice Guide.

Version History

Version 1 – January 2014

Version 1.1 – August 2018
Clarification that an EATA and/or HSP is not required when acquiring, storing, disposing or possessing a fire extinguisher containing a scheduled agent.

Version 1.2 – January 2021
Amendment to the description of EAHL – experienced persons – as EAHL categories 1-5 have already transitioned to an EAHL – qualified persons licence, they can no longer hold an EAHL – experienced persons licence. Category 6 only caters for those technicians holding an electrical and/or cabling licence.

Fire Protection Industry (ODS & SGG) Board

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Section 1

Foreword

Two issues emerged in the early 1980s that focused the world's attention on the condition of the Earth's atmosphere. These issues were the ongoing depletion of the stratospheric ozone layer and the enhanced greenhouse effect (leading to global warming).

Both effects are exacerbated by the emissions of some of the gaseous fire extinguishing agents used in fire systems and equipment. Depending upon their effect on the environment, these types of extinguishing agents are referred to as Ozone Depleting Substances (ODS) and Synthetic Greenhouse Gases (SGG). Some extinguishing agents, such as halon or hydro-chloro-flourocarbons are both ODS and SGG, while other extinguishing agents such as hydroflourocarbons (e.g. FM-200) are SGG but not ODS.

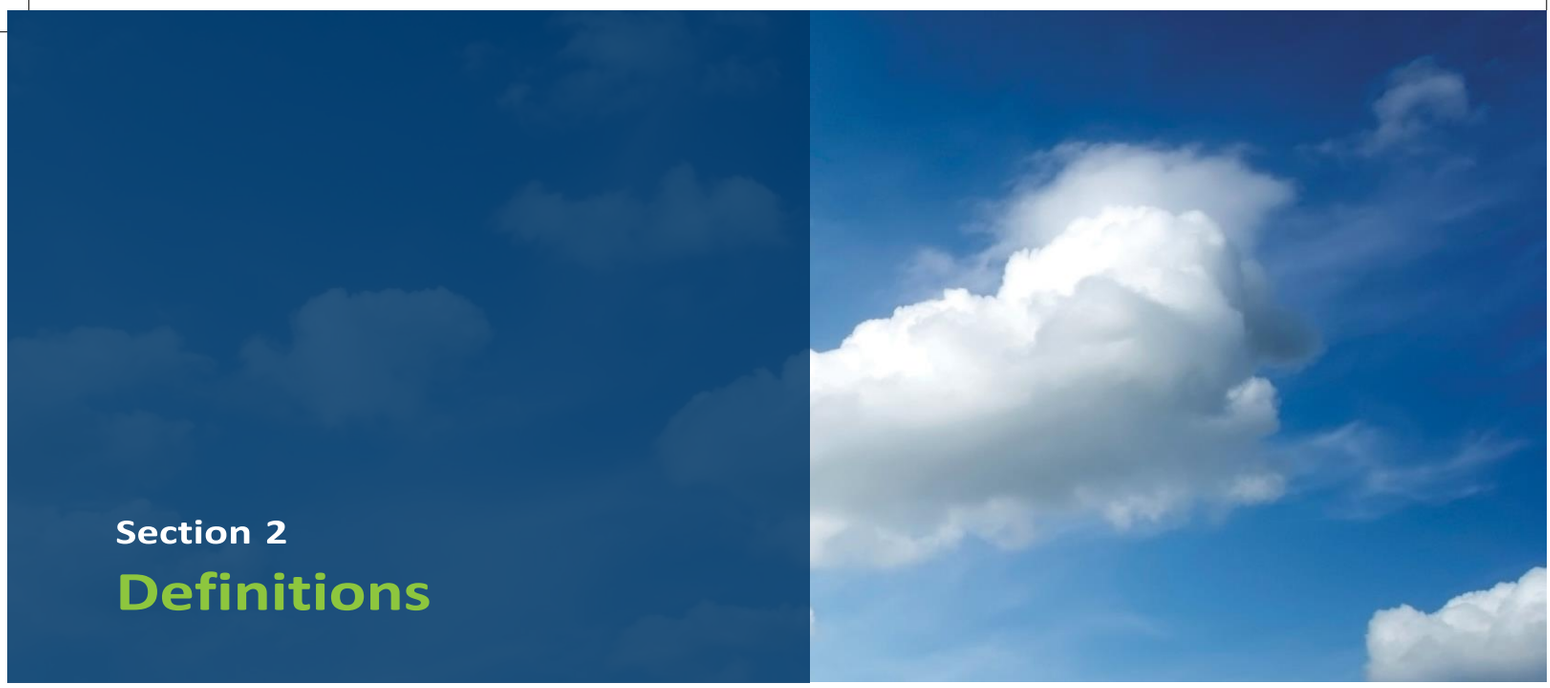
Schedule 1 of the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989* (the Act) provides a complete list of scheduled ODS and SGG substances which are covered by the Act.

The objective of this Good Practice Guide is to provide guidance to fire protection industry practitioners in the handling, storage and disposal of scheduled ODS and SGG used in the fire industry, to reduce emissions into the environment and to ensure compliance with the provisions of the legislation.

This Good Practice Guide covers many aspects associated with the correct handling and management of ODS and SGG extinguishing agents to ensure compliance with the Act, but it is not exhaustive and should be read in conjunction with other relevant information.

The Fire Protection Industry (ODS & SGG) Board endorses the use of this Good Practice Guide by all those who manufacture, sell, install, commission, service and decommission fire protection equipment and systems that use scheduled ODS and SGG extinguishing agents.

The overriding objective of this Good Practice Guide is to prevent the unnecessary discharge of any scheduled ODS and SGG extinguishing agent.



Section 2

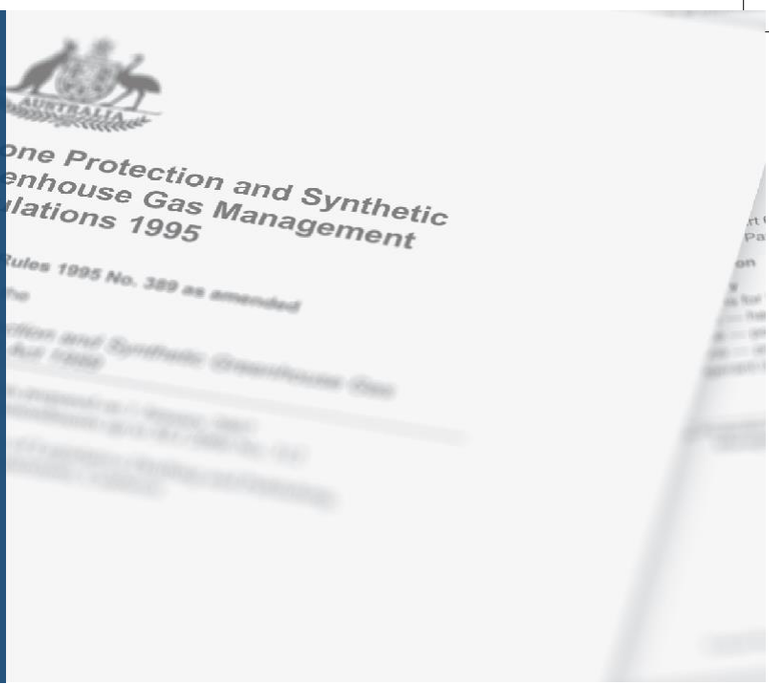
Definitions

The definitions below apply to this Good Practice Guide:

- **(the) Act:** refers to the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989*.
- **Bulk containers:** any containers used to store ODS and SGG extinguishing agents other than:
  - containers that are physically attached to and form part of an installed fire protection system
  - fire extinguishers.
- **Container:** a storage vessel used for the storage and/or transport of scheduled ODS and SGG substances used in fire equipment and systems. The term container encompasses terms such as pressure vessels, bulk agent containers, cylinders, fixed system containers and portable fire extinguishers.
- **Destruction:** a process whereby ODS and SGG extinguishing agents are disposed of by being permanently transformed into substances which are not controlled under the Act.
- **Extinguishing agent handling licence (EAHL):** a licence as described in Table 322 of the Regulations permitting a person to handle scheduled ODS and SGG extinguishing agents.
- **Extinguishing agent trading authorisation (EATA):** an authorisation issued under Regulation 331 permitting a person to acquire, store or dispose of scheduled ODS and SGG extinguishing agents in bulk containers that are for use, or have been used, in fire protection equipment.
- **Fire extinguisher:** a manually operated wheeled or portable fire extinguisher containing a scheduled ODS and SGG extinguishing agent.
- **Fire protection equipment:** equipment that releases an extinguishing agent to prevent, control or extinguish a fire; or suppress an explosion.
- **Fire Protection Industry (ODS & SGG) Board:** the Board appointed by the Minister under Regulation 311.
- **Fixed fire protection system:** an installed fire protection system where scheduled ODS and SGG extinguishing agent is distributed via pipes to discharge nozzles.
- **Halon special permit:** a permit issued under the provisions of Regulation 341, permitting a person to possess halon that is for use in fire protection equipment.
- **In-transit:** ODS and SGG extinguishing agent containers on a transport vehicle; or in short-term storage of a duration less than three months during transit.
- **ODS and SGG extinguishing agent:** a substance listed in Schedule 1 of the Act that can be used to prevent, control or extinguish a fire; or suppress an explosion. (Note: many substances listed in the Act are both ozone depleting and synthetic greenhouse gases. However, this term is also used to describe those that may only be ozone depleting or synthetic greenhouse gases).
- **Reclaim:** processing of recovered ODS and SGG extinguishing agent, to a specified purity so that it is suitable for reuse.
- **Recover:** to remove (or decant) and store ODS and SGG extinguishing agents in any condition.
- **Recycle:** to re-use a recovered or reclaimed ODS and SGG extinguishing agent.
- **(the) Regulations** refers to the *Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995*.
- **Returned agent:** any ODS and SGG extinguishing agent recovered from fire protection equipment and systems returned to the supplier for recycling or reclamation or disposal.
- **Service provider:** means the entity with the appropriate EATA and EAHLs that:
  - undertakes the inspection, testing and maintenance of the container in accordance with the appropriate standard (e.g. AS 1851:2012), on behalf of the owner
  - undertakes the installation and commissioning of the container in accordance with the appropriate and relevant standard (e.g. AS/ISO 14520).
- **Special circumstance exemption:** an entitlement to a person to the privileges of the holder of a) an extinguishing agent handling licence; or b) an extinguishing agent trading authorisation; or c) a halon special permit.

Section 3

Obligations under the Act and Board recommendations



3.1 Licences to handle ODS and SGG extinguishing agents

3.1.1 Extinguishing agent handling licence (EAHL)

Individuals who handle or work with any fire protection equipment where such activities may cause an emission of scheduled ODS and SGG extinguishing agents (including halon) must hold an extinguishing agent handling licence (EAHL). Activities that may cause an emission are detailed in table 322 of the Regulations. EAHLs are issued by the Fire Protection Industry (ODS & SGG) Board.

In particular, the Regulations state that handling includes:

- recovering (or decanting) scheduled ODS and SGG extinguishing agents
- installing or maintaining fire protection equipment that contains scheduled ODS and SGG extinguishing agents
- decommissioning or disposing of fire protection equipment that contains scheduled ODS and SGG extinguishing agents.

Handling does not include the transportation of fire protection equipment or the use of fire protection equipment to prevent, control or extinguish a fire; or suppress an explosion.

3.1.2 Extinguishing agent handling licence entitlements

Six licence categories exist and each entitles the licence holder to engage in work as described in Table 322 of the Regulations. A copy of this table is reproduced on the next page.

Individuals must not engage in any work described in Table 322 of the Regulations unless they hold the appropriate category of EAHL.

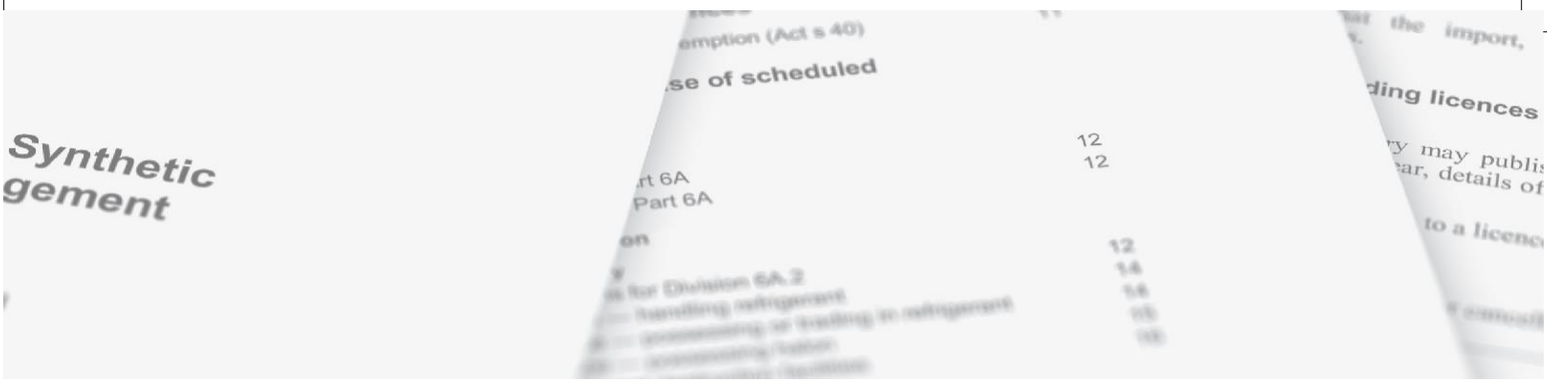
It is the responsibility of the licence holder to maintain a current licence.

Table 322 licences and entitlements
(from the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995)

Item	Licence	Entitlement of Licensee
1	Portable Fire Extinguisher Maintenance Licence	To charge, decant and recharge a fire extinguisher, and repair the extinguisher valve.
2	Fixed System Installation and Decommissioning Licence	(1) To install and decommission a gaseous fire extinguishing system (fire protection equipment) including: (a) to install and disconnect actuation devices (mechanisms) to and from container valves (b) to install and disconnect gaseous agent containers (c) to install and disconnect any interconnections to other gaseous system containers (d) to install and disconnect ancillary equipment connections to manifold and pipework (e) to attach and remove transport safety devices, such as valve outlet and actuator port caps, plugs and locking devices installed to prevent accidental discharge. (2) Commission actuation control devices set to operate and engage safety devices as needed and decommission these devices.
3	Fixed System Testing and Maintenance Licence	To test and maintain a gaseous fire extinguishing system (fire protection equipment), including: (a) to test actuation release systems (b) to disconnect and reconnect actuation devices (mechanisms) (c) to disconnect and reconnect any interconnections to other gaseous systems containers (d) to disconnect and reconnect ancillary equipment connections from containers to manifold and pipework (e) to test actuation devices (mechanisms) (f) to perform any tests and maintenance on any fire detection and alarm system, including any remote operation panel and actuation and control system that interfaces with or forms part of a gaseous fire extinguishing system (g) to perform any tests and maintenance on gaseous agent containers and ancillary equipment connections from containers to manifold and pipework.
4	Recovery, Reclamation, Fill and Recycling Licence	To recover, reclaim, fill and recycle an extinguishing agent into and from a fire extinguisher and gaseous fire extinguishing system container from and to a bulk agent container.
5	Warehouse Maintenance Licence	To monitor for leakage stocks of extinguishing agent bulk agent containers in a warehouse and, as needed, to transfer the extinguishing agent from a leaking storage container.
6	Control Systems Installation, Commissioning and Decommissioning Licence	To install, commission and decommission a fire detection and alarm system, including any remote operation panel and actuation and control system that interfaces with or forms part of a gaseous fire extinguishing system.

Note:

- An EAHL is not required for activities:
  - that do not involve scheduled ODS and SGG agents (e.g. Carbon Dioxide or inert gases
  - such as in-situ container liquid level testing where there is no risk of an emission
  - once the container has been fitted with caps, plugs, locking devices, etc.
- Applicants for an EAHL 6 – control systems installation, commissioning and decommissioning licence, will need to demonstrate to the Board that they either hold an electrician's licence or a current cabler's registration. This requirement is necessary to ensure electro-technology regulations governed by other bodies are not breached.
- Fire protection technicians servicing, installing or removing gaseous fire suppression system components under an EAHL 2 and 3 do not need to hold an EAHL 6 if they are only performing isolation functions on fire panels or disconnecting control equipment from ODS and SGG containers.
- Fire protection technicians handling scheduled ODS and SGG containers in-transit are not required to hold an EAHL 5, provided containers are not stored on a permanent basis and no recovery/reclaim/refill operations are undertaken. For further information, please refer to section 8: handling and storage.



Extinguishing agent handling licence types

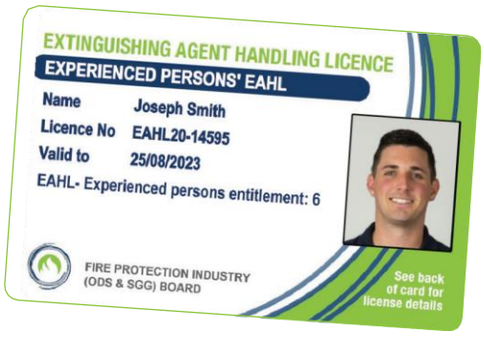
Three types of EAHLs are available to cater for technicians with different levels of industry experience and qualifications. These are as follows:

EAHL – qualified persons
This type of licence is granted to technicians who have demonstrated they are competent to perform the work associated with the category of work for which they hold a licence. Technicians must demonstrate their competency by being assessed against the relevant national units of competency specified in the Regulations. In line with the rules of the Australian Qualification Framework, technicians may demonstrate competency against the units of competency by recognition of prior learning and experience or by completing training.

EAHL – experienced persons
This type of permit is only applicable to EAHL – experienced persons category 6 and was introduced to cater for those technicians currently working in the fire industry who have experience in working with gaseous fire protection systems.

For an individual to be approved for an EAHL – experienced persons category 6, they will need to demonstrate to the Board that they either hold an electrician's licence or a current cabler's registration, and also provide the following information:

- the types of systems and extinguishing agents worked on
- the length of time the applicant has worked with each extinguishing agent and fire system
- the role(s) the applicant has had and a clear description of what work they actually did
- details of any relevant competency assessments (including in-house training)
- include with your application, a scanned copy of your current electrical and/or cabling card.



Trainee licence
Any person who does not have the necessary experience to obtain either an EAHL – qualified persons or EAHL – experienced persons will need to obtain a trainee licence before commencing work with any scheduled ODS and SGG extinguishing agents.

A trainee licence holder must only work under the immediate supervision of a person who holds an experienced or qualified persons EAHL appropriate to the work being undertaken. EAHL – experienced or qualified persons who supervise a trainee licence holder should provide an appropriate level of supervision for all trainees they are supervising and accept responsibility for the actions of those trainee licence holders.

EAHL – experienced or qualified persons supervising trainee licence holders working with scheduled ODS and SGG extinguishing agents should ensure that all trainees hold a current trainee licence.

3.1.3
Units of competency required to obtain a qualified extinguishing agent handling licence

	Licence	Units of Competency Required	
1	Portable Fire Extinguisher Maintenance Licence	CPPFES2003	Safely move loads and dangerous goods
		CPPFES2006	Prepare for installation and service operations
		CPPFES2021	Inspect, test and maintain fire extinguishers
		CPPFES2043	Apply regulations to prevent ozone depleting substances and greenhouse gas emissions
		CPPCMN2002	Participate in workplace safety arrangements
2	Fixed System Installation and Decommissioning Licence	CPPFES2003	Safely move loads and dangerous goods
		CPPFES2006	Prepare for installation and service operations
		CPPFES2043	Apply regulations to prevent ozone depleting substances and greenhouse gas emissions
		CPPFES3044	Interpret installation requirements for gaseous fire suppression systems
		CPPFES3045	Install gaseous agent containers and actuators
		CPPFES3046	Decommission gaseous agent containers and actuators
		CPPCMN2002	Participate in workplace safety arrangements
3	Fixed System Testing and Maintenance Licence	CPPFES2003	Safely move loads and dangerous goods
		CPPFES2006	Prepare for installation and service operations
		CPPFES2025	Inspect, test, and maintain gaseous fire protection systems
		CPPFES2043	Apply regulations to prevent ozone depleting substances and greenhouse gas emissions
		CPPFES3046	Decommission gaseous agent containers and actuators
		CPPFES2047	Inspect and test control and indicating equipment
		CPPCMN2002	Participate in workplace safety arrangements
4	Recovery, Reclamation, Fill and Recycling Licence	CPPFES2003	Safely move loads and dangerous goods
		CPPFES2021	Inspect, test and maintain fire extinguishers
		CPPFES2043	Apply regulations to prevent ozone depleting substances and greenhouse gas emissions
		CPPFES2048	Receive and dispatch scheduled gaseous fire-extinguishing agents
		CPPFES2049	Conduct recovery, reclaim and fill operations for scheduled gaseous fire-extinguishing agents
		CPPCMN2002	Participate in workplace safety arrangements
5	Warehouse Maintenance Licence	CPPFES2003	Safely move loads and dangerous goods
		CPPFES2043	Apply regulations to prevent ozone depleting substances and greenhouse gas emissions
		CPPFES2048	Receive and dispatch scheduled gaseous fire-extinguishing agents
		CPPFES2049	Conduct recovery, reclaim and fill operations for scheduled gaseous fire-extinguishing agents
		CPPFES2050	Monitor storage operations for scheduled gaseous fire-extinguishing agents
		CPPCMN2002	Participate in workplace safety arrangements
6	Control Systems Installation, Commissioning and Decommissioning Licence	CPPFES2043	Apply regulations to prevent ozone depleting substances and greenhouse gas emissions
		UEEEC0041	Install fire detection and warning system apparatus
		UEEEC0076	Verify compliance and functionality of fire protection system installations
		UEEEC0026	Enter and verify programs for fire protection systems
		UEEEC0008	Commission large fire protection systems
		UEEEC0071	Troubleshoot fire protection systems

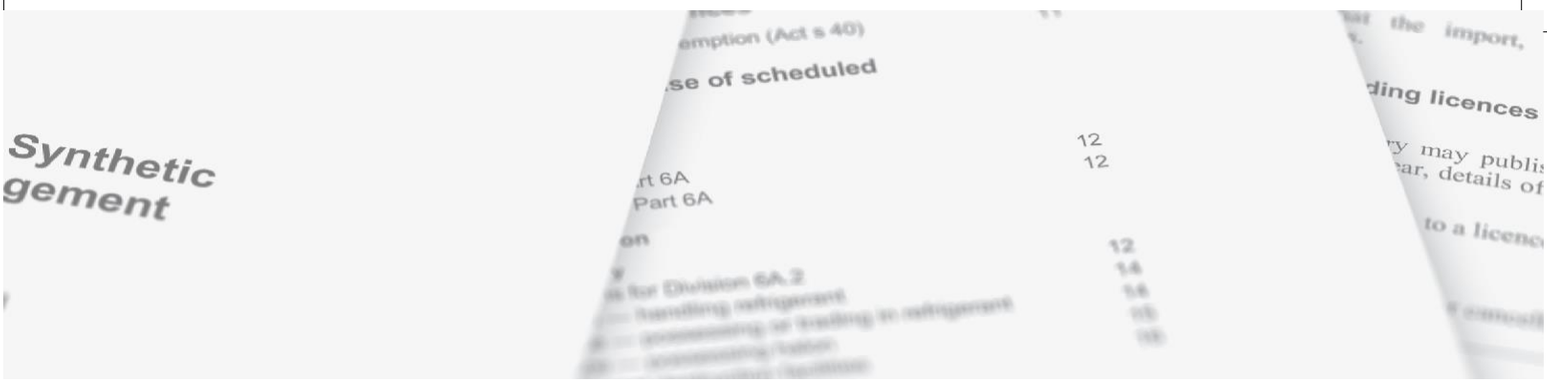
3.1.4
Responsibilities of employers

Employers offering services involving scheduled ODS and SGG extinguishing agents should ensure that all employees involved in such service hold a current EAHL appropriate to the work they undertake.

Employers should ensure that trainee licence holders only work under the supervision of an EAHL – experienced or qualified persons holder who has a category of licence appropriate to the work being undertaken.

3.1.5
Applying for an extinguishing agent handling licence

Applications must be made to the Fire Protection (ODS & SGG) Industry Board on the appropriate forms available from *www.fpib.com.au*



3.2
Trading in scheduled ODS and SGG extinguishing agents

3.2.1
Extinguishing agent trading authorisation (EATA)

An extinguishing agent trading authorisation (EATA) is required to acquire (buy), store, distribute (on-sell) or dispose of any scheduled ODS and SGG extinguishing agent in bulk containers. EATAs are issued by the Fire Protection (ODS & SGG) Industry Board.

Note: An EATA is not required for:

- ODS and SGG in containers that are physically attached and form part of an installed fire protection system or fire extinguishers
- fire protection equipment where the ODS and SGG is contained in the equipment.

3.2.2
Responsibilities of extinguishing agent trading authorisation holders

Extinguishing agent trading authorisation holders are bound by the provisions detailed in the Regulations and must also adhere to any conditions specified from time to time by the Fire Protection Industry (ODS & SGG) Board.

EATA holders must:

- regularly monitor stocks for leakage of extinguishing agent stored in bulk agent containers
- transport and store ODS and SGG container(s) in accordance with required state/territory dangerous goods legislation
- operate in accordance with the procedures contained within their risk management plans
- maintain accurate records in accordance with the provisions of the Regulations and provide quarterly reporting on stock levels and usage of scheduled ODS and SGG extinguishing agents to the Fire Protection (ODS & SGG) Industry Board, using the quarterly usage template provided by the Board
- ensure staff who need to transfer an extinguishing agent from extinguishers, systems or bulk containers (such as when a leak is found) hold an appropriate EAHL (e.g. 4 or 5). Note that leak testing on its own does not constitute handling gas, and therefore does not require an EAHL
- only transfer scheduled ODS and SGG extinguishing agent using equipment that complies with specifications detailed in Appendix 1 – Requirements for ODS and SGG extinguishing agent recovery and recycling equipment.


EXTINGUISHING AGENT TRADING AUTHORISATION

CERTIFICATE NUMBER: EATA14585
EXPIRES ON: 25/08/2023

The Fire Protection Industry (ODS & SGG) Board hereby certifies that

Fire Protection Industry (ODS & SGG) Board

is approved - in accordance with the provisions of the Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 - for the period between **25 August 2020** and **25 August 2023**, to acquire, store or dispose of "extinguishing agents that are for use in, or have been used in, fire protection equipment for the purpose as stated in the application.

Paul Hodgson
Executive Officer
Ozone Protection

FIRE PROTECTION INDUSTRY (ODS & SGG) BOARD

3.2.3
Applying for an extinguishing agent trading authorisation

Applications must be made to the Fire Protection (ODS & SGG) Industry Board on the appropriate forms available from *www.fpib.com.au*

Applications for an EATA must include a risk management plan. This plan must be prepared in accordance with AS/NZS ISO 31000: 2018 Risk management – Guidelines, and should feature information about how the following matters will be addressed, including:

- emissions from leaks, or the failure of storage containers
- damage by intruders
- the transfer of extinguishing agents from leaking storage containers
- how the premises will be operated in a way that is consistent with Australia's obligations under the Montreal Protocol.

3.3
Possessing halon

3.3.1
Halon special permit

A halon special permit is required to possess halon for use in fire protection equipment or systems.

3.3.2
Responsibilities of halon special permit holders

Holders of halon special permits must:

- comply with the conditions attached to their permit
- operate in accordance with the procedures contained within their risk management plans
- ensure halon is used only where necessary to protect human life or equipment critical to the community, and where no practical alternative to halon exists
- ensure that all personnel handling halon hold the appropriate EAHL.

3.3.3
Applying for a halon special permit

Applicants seeking a halon special permit (HSP) must demonstrate that there is no viable alternative to halon available and that the proposed use of halon is in accordance with the provisions of Regulation 341. Applicants must provide information to support their application to the satisfaction of the Fire Protection (ODS & SGG) Industry Board.

Applications for a HSP are required by the Board to include a risk management plan. This plan should be prepared in accordance with AS/NZS ISO 31000: 2018 Risk management – Guidelines, and should feature information about how the following matters will be addressed, including:

- emissions from leaks, or the failure of storage containers
- damage by intruders
- the transfer of extinguishing agents from leaking storage containers
- how the premises will be operated in a way that is consistent with Australia's obligations under the Montreal Protocol.

Applications must be made to the Fire Protection (ODS & SGG) Industry Board on the appropriate forms available from *www.fpib.com.au*

3.4
Discharge of scheduled ODS and SGG extinguishing agents

3.4.1
Approval to discharge a scheduled ODS and SGG extinguishing agent

With the exception of suppressing a fire, a scheduled ODS and SGG is not permitted to discharge unless permission has been granted by the Fire Protection (ODS & SGG) Industry Board (the Board).

In accordance with Regulation 305, the Fire Protection (ODS & SGG) Industry Board may grant a permit to discharge an ODS and SGG extinguishing agent to:

- test the design of a fire extinguishing system or a fire extinguisher
- calibrate equipment.

When a permit to discharge has been granted, the permit holder must only allow discharge to occur in accordance with the conditions of the granted permit. The permit holder should also do everything reasonably practical to minimise the amount of ODS and SGG extinguishing agent discharged.

3.4.2
Applying for a discharge permit

Applications must be made to the Fire Protection (ODS & SGG) Industry Board on the appropriate forms available from *www.fpib.com.au*

An application for a permit to discharge should only be made after the applicant has determined that there is no reasonable alternative. The application should detail:

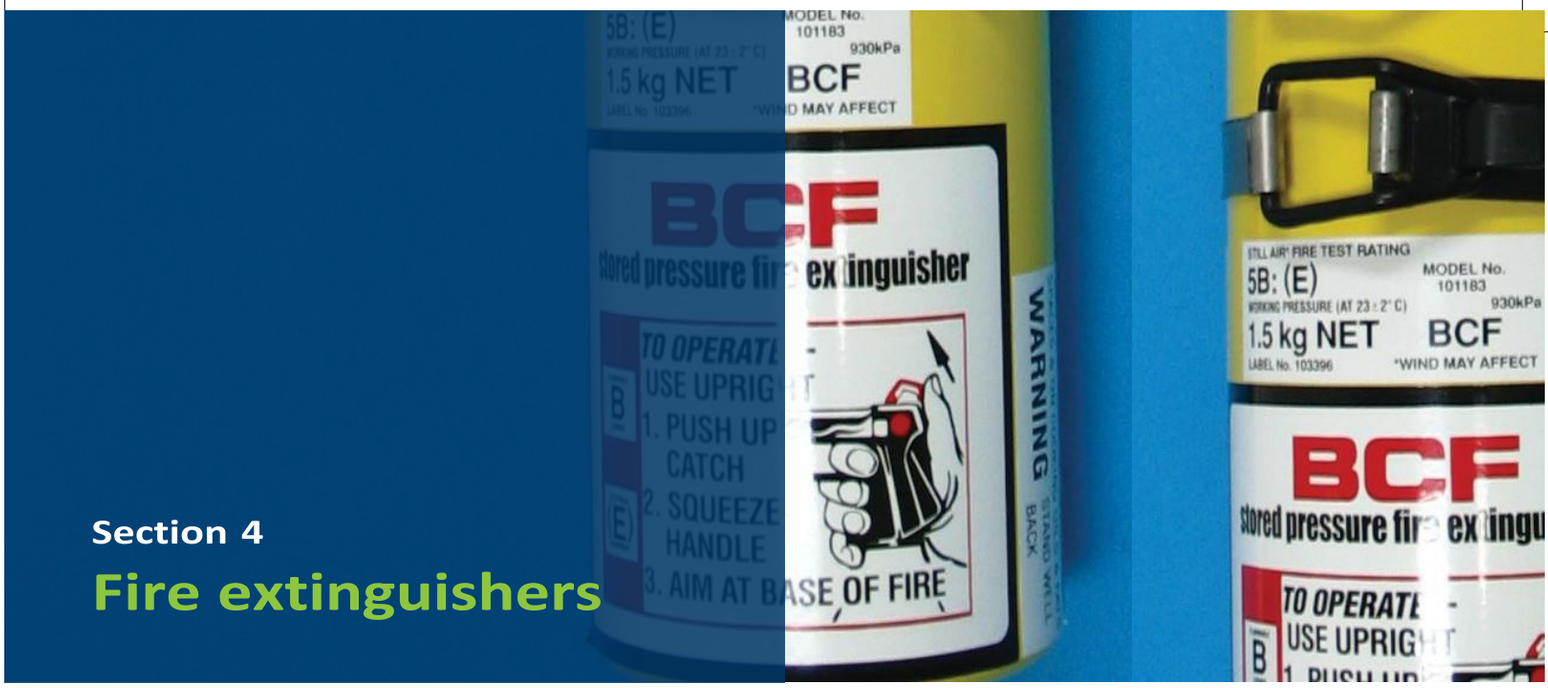
- the reasons for the discharge
- the actions to be undertaken to minimise the amount of discharge
- the alternatives considered and the reasons for their rejection.

3.4.3
Notification of a discharge of a scheduled ODS and SGG extinguishing agent

All discharges of scheduled ODS and SGG extinguishing agents should be reported to the Board via the discharge notification form, unless a permit to discharge was granted prior to the discharge occurring.

While it is the responsibility of the EAHL holder engaged by the service provider to report a discharge of ODS and SGG extinguishing agents, any individual aware of a discharge incident is encouraged to report this to the Board.

The discharge notification form can be found at *www.fpib.com.au*



Section 4

Fire extinguishers

4.1 Use of fire extinguishers containing scheduled ODS and SGG extinguishing agent

With the exception of suppressing a fire, a fire extinguisher containing a scheduled ODS and SGG is not permitted to discharge unless prior permission has been granted by the Fire Protection (ODS & SGG) Industry Board.

4.2 Sale, distribution and possession

An extinguishing agent trading authorisation is not required to sell, distribute or possess fire extinguishers containing a scheduled ODS and SGG extinguishing agent.

4.3 Inspection

A fire extinguisher containing a scheduled ODS and SGG extinguishing agent must be inspected and tested at the frequencies set out in the applicable schedules of AS 1851:2012.

Note: personnel carrying out six-monthly and yearly activities (as defined in AS 1851:2012) on fire extinguishers containing scheduled ODS and SGG extinguishing agents are not required to hold an EAHL. However, employers should ensure that these technicians:

- are aware of the environmental effects of the emission of these substances into the atmosphere
- do not carry out any activities that carry the risk of an accidental discharge, such as, the removal of a safety pin or any components associated with discharging the extinguisher.

Where any defects are identified during inspection that may result in the release of an ODS and SGG extinguishing agent, the service person should:

- immediately advise the owner
- where possible, take corrective action to prevent an emission
- record the advice and corrective actions taken, in the maintenance record.

Where on-site corrective action to prevent an emission is not practicable, the fire extinguisher should:

- be immediately removed from service
- have the safety pin wired in place
- be clearly labelled as 'defective'
- taken to a workshop to take the appropriate corrective action.

4.4 Maintenance

Fire protection technicians who carry out any maintenance involving the decanting, charging or recharging of fire extinguishers containing scheduled ODS and SGG extinguishing agents must hold a portable fire extinguisher maintenance licence (EAHL 1) as well as a recovery, reclamation, fill and recycling licence (EAHL 4).

Section 5

Fixed gaseous fire suppression systems

5.1 Installation and decommissioning of fixed gaseous fire suppression systems containing scheduled ODS and SGG extinguishing agents

In accordance with the Regulations (table 322) installation and decommissioning means:

- installing and disconnecting actuation devices (mechanisms) to and from container valves
- installing and disconnecting gaseous agent containers
- installing and disconnecting any interconnections to other gaseous system containers
- installing and disconnecting ancillary equipment connections to manifold and pipework
- attaching and removing transport safety devices, such as valve outlet and actuator port caps, plugs and locking devices installed to prevent accidental discharge.

5.2 Installation

Installation, modifications or additions to existing fixed gaseous fire suppression systems containing scheduled ODS and SGG extinguishing agents must only be completed by technicians who hold a fixed system installation and decommissioning licence (EAHL 2).

Note: an EAHL 2 is not required to install pipework other than that which attaches directly to actuator devices or to ODS and SGG extinguishing agent container valves.

Note: the installation of a fixed halon system is not permitted unless:

- permitted by Regulation 304 (this includes some Australian Defence Force, aviation and international shipping applications)
- the owner of the system to be fitted holds a halon special permit for the system.

5.3 Commissioning

Fixed gaseous fire suppression systems that contain a scheduled ODS and SGG extinguishing agent must be commissioned by technicians who hold either a fixed system installation and decommissioning licence (EAHL 2) or a fixed system testing and maintenance licence (EAHL 3).

Before commissioning a system, a technician holding either an EAHL 2 or an EAHL 3 should inspect all actuation systems and container valves to make sure that there is no risk of an unintended discharge of any scheduled ODS and SGG extinguishing agents.

Note: for electrically actuated systems, these commissioning activities should only be completed after a technician holding an EAHL 6 has completed their commissioning activities and all actuation devices have been reset.

Where a discharge of the system is necessary for the purpose of testing, this may only be done with the prior written approval of the Fire Protection (ODS & SGG) Industry Board.

5.4
Maintenance

Fixed gaseous fire suppression systems containing scheduled ODS and SGG extinguishing agents must be inspected, tested and maintained in accordance with AS 1851.

Before any maintenance is carried out, a technician holding an EAHL 2 or an EAHL 3 must remove the actuators from the container valves to prevent discharge of the system.

Note: operation of an electrical maintenance switch or device does not satisfy this requirement.

A person holding an EAHL 3 is permitted to undertake both the electrical and mechanical maintenance activities associated with fire protection systems containing ODS and SGG extinguishing agents.

A person holding an EAHL 2 is only permitted to undertake mechanical maintenance activities involving the installation or disconnection of actuation devices, agent containers or interconnection within a gaseous system.

Once an ODS and SGG extinguishing agent container has been disconnected and fitted with caps, plugs, locking devices, etc. to prevent accidental discharge, an EAHL is not required to complete other maintenance activities. Reinstating actuation devices or connecting discharge hoses to container valves must, however, be performed by the holder of an EAHL 2 or 3.

Prior to reinstating actuation devices, the EAHL 2 or 3 holder should make sure each actuator is reset.

Note: prior to undertaking any maintenance on a halon system, the technician should check with the Fire Protection Industry (ODS & SGG) Board that the owner holds a halon special permit for its possession and use. If the owner does not hold a halon special permit, the system should not be serviced and the owner advised that decommissioning of the system and disposal of the halon is required, in accordance with Regulation 304.

5.5
Decommissioning

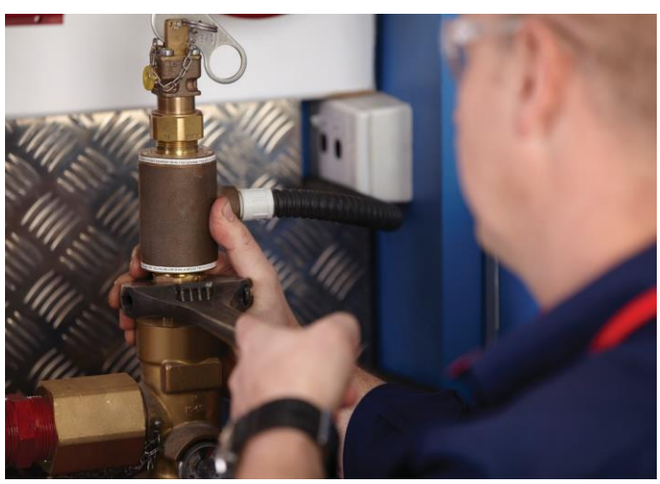
Decommissioning of fixed gaseous fire suppression systems that contain a scheduled ODS and SGG extinguishing agent must only be carried out by a technician who holds an EAHL 2.

Decommissioning should be undertaken in accordance with the following requirements:

- All actuators should be removed from the container valves.
- All container valve discharge outlets should be capped. Caps should not obstruct the pressure relief devices.
- Container valve discharge caps should be rated to one and a half times the working pressure of the container.
- Containers should be handled and stored in a safe and secure manner that will not cause or permit its contents to be released to the atmosphere.

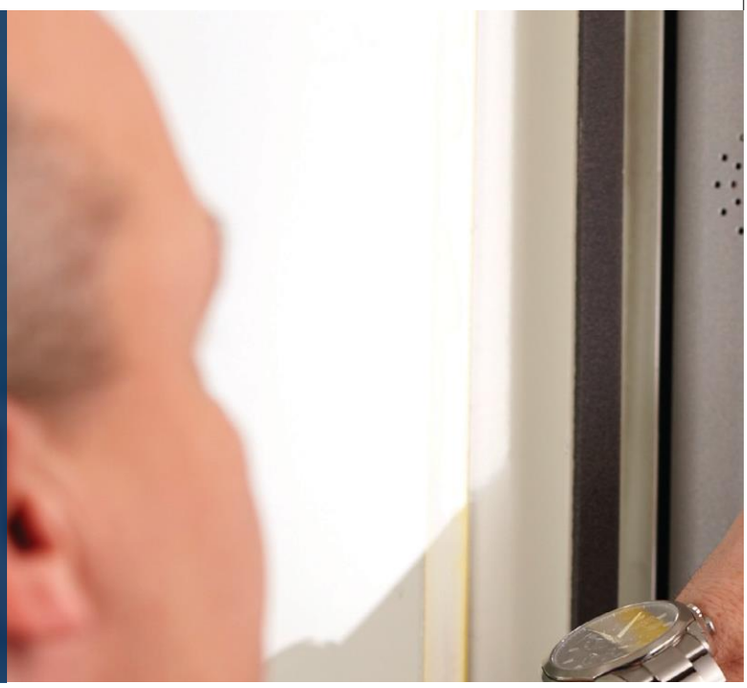
Note: once the ODS and SGG extinguishing agent container(s) have been disconnected from the gaseous fire suppression system, dismantling of the pipework etc. may be undertaken by a person who does not hold an EAHL.

ODS and SGG extinguishing agent containers once removed from a decommissioned system should be returned to a company holding an extinguishing agent trading authorisation. A list of current EATA holders can be found at *www.fpib.com.au*



Section 6

Fire detection, actuation and control systems



6.1 Installation

Installation of new or modifications/additions to existing detection, actuation and control systems associated with a fixed gaseous fire suppression system must only be completed by a person holding an EAHL 6. This includes panel configuration and programming changes.

The electronic detection, actuation and control systems associated with new fixed gaseous fire suppression system installations containing scheduled ODS and SGG extinguishing agent should comply with the relevant parts of AS/ISO 14520 or appropriate international standard.

Note: an EAHL 6 is not required for installation activities prior to connection or commissioning of detection and control systems. However, an EAHL 6 holder should inspect a system before connecting or commissioning the detection and control systems.

6.2 Commissioning

The detection, actuation and control systems associated with a fixed gaseous fire suppression system installation containing a scheduled ODS and SGG extinguishing agent must be commissioned by a person holding an EAHL 6.

Commissioning activities should be completed before actuators are connected to the container valves by an EAHL 2 or EAHL 3 holder.

Prior to commissioning a system, an EAHL 2 or EAHL 3 holder should inspect the control system and reset all actuators to ensure that no unnecessary discharge of an ODS and SGG extinguishing agent occurs.

Where discharge of a system is necessary for the purpose of testing, this may only occur with the prior written approval of the Fire Protection (ODS & SGG) Industry Board. An application for a permit to discharge can be made via the relevant form. This can be found at *www.fpib.com.au*

6.3 Maintenance

Fixed gaseous fire suppression systems containing scheduled ODS and SGG extinguishing agents should be inspected, tested and maintained in accordance with AS 1851:2012.

Before any maintenance is carried out, actuators need to be removed from the container valves to prevent discharge of the system. This can only be done by a technician holding an EAHL 2 or EAHL 3.

Note: operation of an electrical maintenance switch or device does not satisfy this requirement.

A person holding an EAHL 3 is permitted to undertake both the electrical and mechanical maintenance activities associated with fire protection systems containing ODS and SGG extinguishing agents.

A person holding an EAHL 2 is only permitted to undertake mechanical maintenance activities involving the installation or disconnection of actuation devices, agent containers or interconnection within a gaseous system.

Once an ODS and SGG extinguishing agent container has been disconnected and fitted with caps, plugs, locking devices, etc. to prevent accidental discharge, an EAHL is not required to complete other maintenance activities. Reinstating actuation devices or connecting discharge hoses to container valves must, however, be performed by the holder of an EAHL 2 or EAHL 3.

Prior to reinstating actuation devices, the EAHL 2 or EAHL 3 holder needs to ensure each actuator is reset.

Any system modifications required as a result of maintenance may only be undertaken by a technician who holds an EAHL 6.

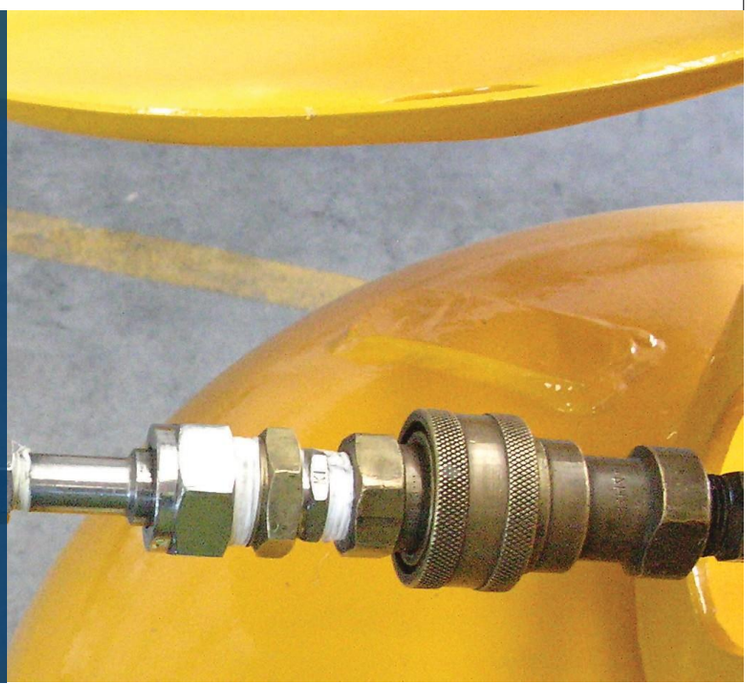
6.4 Decommissioning

Prior to the decommissioning of detection, actuation and control systems associated with a fixed gaseous fire suppression system, all actuation devices should be disconnected, and only by a person holding an EAHL 2 or EAHL 3.

An EAHL is not required for subsequent removal/dismantling of a detection, actuation and control system.

Section 7

Recovery and reclamation



Facilities undertaking the reclaim, recharge (fill) and recycling of scheduled ODS and SGG extinguishing agents must hold an extinguishing agent trading authorisation, or in the case of halon, a halon special permit.

Technicians operating recovery, reclaim, recharge (fill) and recycling equipment for scheduled ODS and SGG extinguishing agents must hold an EAHL 4.

To avoid contamination, operations involving the recovery and recycling of scheduled ODS or SGG extinguishing agents should be kept separate from new agent used for initial filling of gaseous system containers and fire extinguishers.

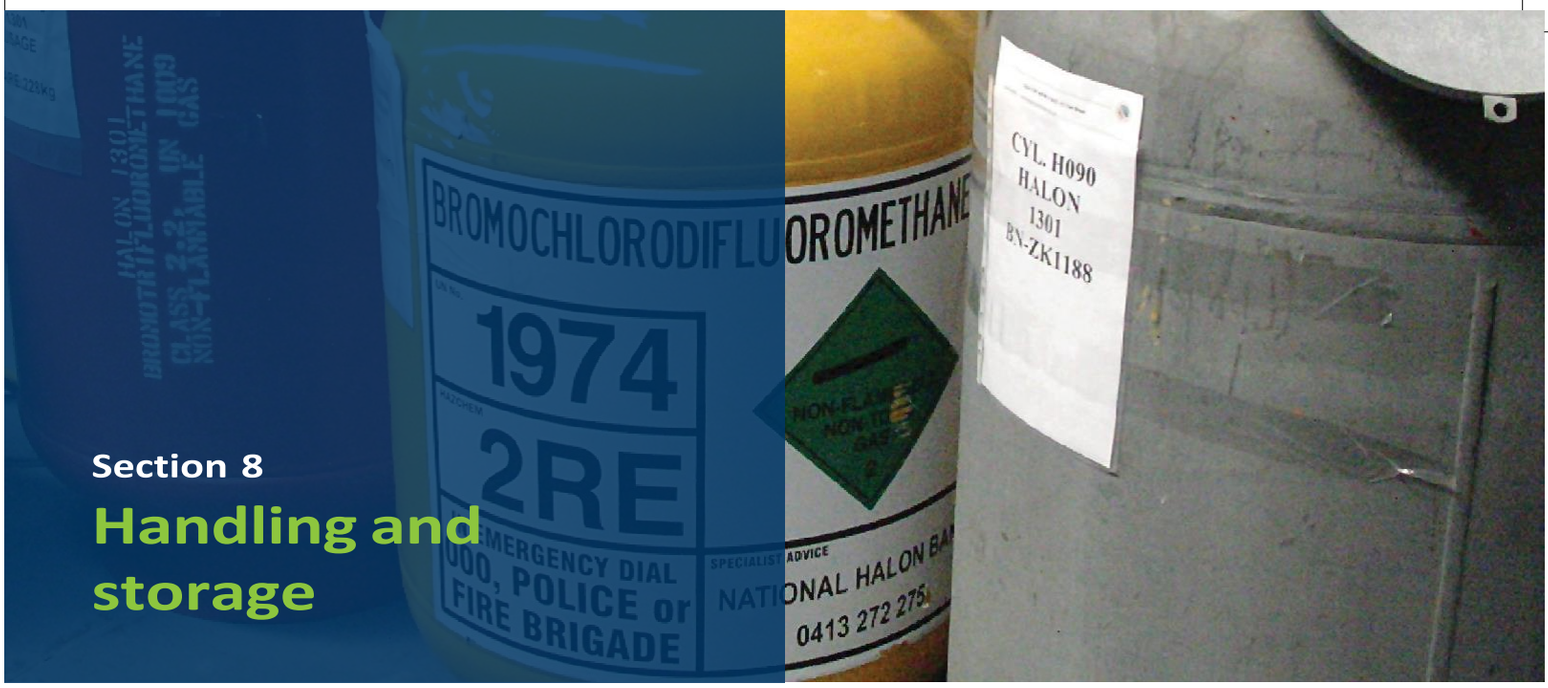
Note: different types of recovered ODS and SGG fire extinguishing agents should be stored in separate containers and not be mixed together.

Equipment used for the recovery, recharge or transfer of ODS and SGG extinguishing agents should comply with the requirements detailed in Appendix 1 – Requirements for ODS and SGG extinguishing agent recovery and recycling equipment.

Containers used for the storage of recovered ODS and SGG extinguishing agent should be stored so as not to cause or permit the release of any agent to the atmosphere. Containers should be regularly monitored to make sure that any release of agent is quickly detected and stopped.

Minimum quality requirements for recovered scheduled ODS and SGG extinguishing agents depend upon the intended use of the recovered agent and are as follows:

- Extinguishing agent recovered as part of service and testing of containers, which is to be returned to the system from which it was recovered, should have particulates and moisture removed.
- Extinguishing agent recovered and intended for resale should be returned to the original manufacturer's purity specifications and have this confirmed by laboratory analysis.
- Extinguishing agent recovered for disposal does not require cleaning.



Section 8

Handling and storage

Facilities storing bulk scheduled ODS and SGG extinguishing agents must hold an extinguishing agent trading authorisation (EATA) or in the case of halon, a halon special permit (HSP).

The warehousing of scheduled ODS and SGG extinguishing agents stored in ODS and SGG container(s) not in-transit needs to be monitored by a person who holds an EAHL 5.

Note: in practice this may require a site to have more than one EAHL 5 holder to cater for staff absences (e.g. holidays).

Transport companies storing in-transit ODS and SGG extinguishing agent containers are not required to hold an EATA.

Fire protection technicians handling scheduled ODS and SGG containers in-transit are not required to hold an EAHL 5, provided containers are not stored on a permanent basis and no recovery/reclaim/refill operations are undertaken.

The following requirements should be adhered to:

- Containers holding scheduled ODS and SGG extinguishing agents should be stored and handled according to the state/territory dangerous goods legislation. Labelling should be provided to allow ready identification by users and emergency teams.
- Signage should be provided in accordance with the required state/territory dangerous goods legislation.

- Warehouse staff should refer to their internal relevant safety data sheets (SDS) prior to handling scheduled ODS and SGG extinguishing agent containers.
- Containers should be handled with care to avoid any damage that could result in an accidental discharge.
- Containers should be regularly checked for leakage and any leaks identified and rectified as soon as practical.
- All actuators should be removed from the container valves.
- All container valve discharge outlets should be capped. Caps should not obstruct the pressure relief devices.
- Container valve discharge caps should be rated to one and a half times the working pressure of the container.
- Containers should be handled and stored in a safe and secure manner that will not cause or permit the contents to be released to the atmosphere.

Section 9

Disposal

Disposal of scheduled ODS and SGG extinguishing agents should be completed in a way that prevents emissions to the atmosphere.

In accordance with the Regulations, any scheduled ODS and SGG extinguishing agents may be delivered to any of the following for re-use or disposal:

- the holder of an extinguishing agent trading authorisation
- the operator of an approved extinguishing agent destruction facility
- the officer in charge of a fire station (hand-held halon extinguishers only).

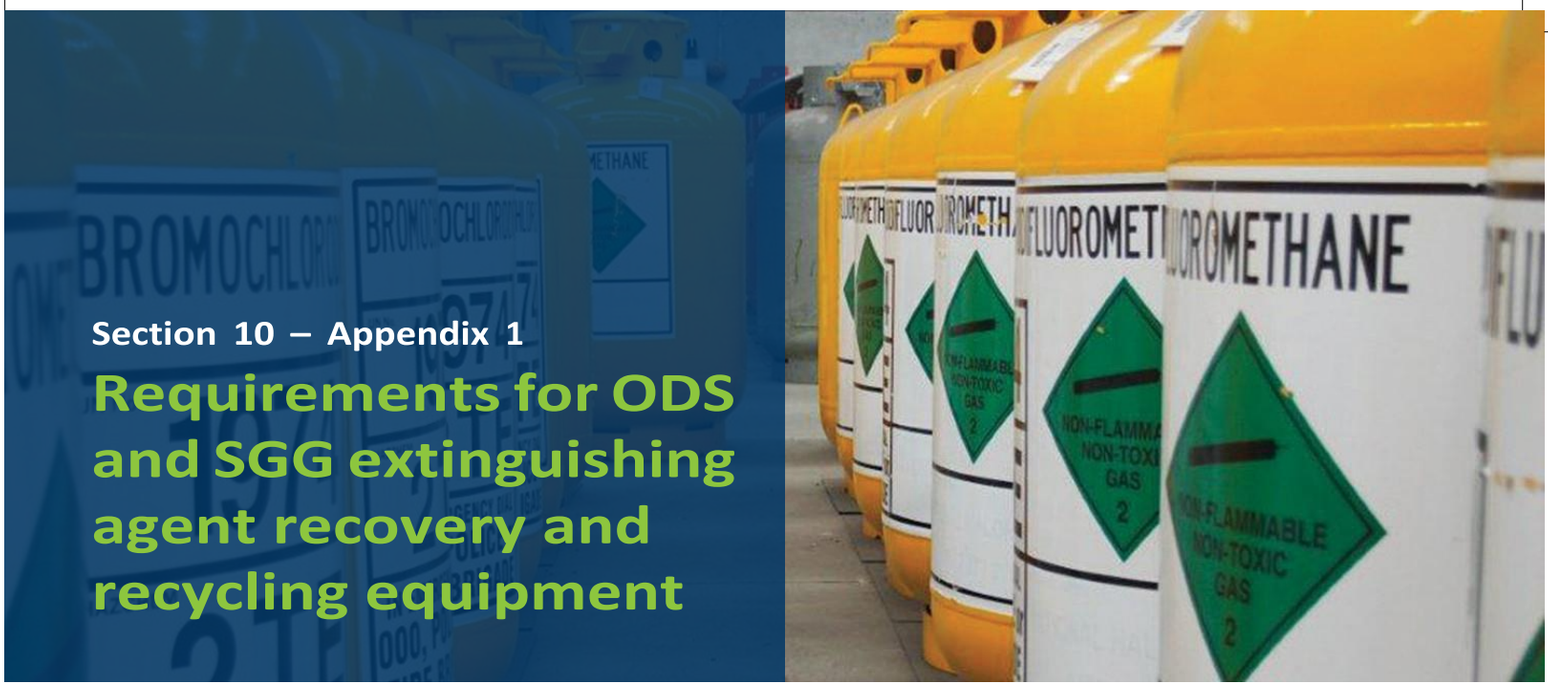
The Board recommends that scheduled ODS and SGG extinguishing agents should be delivered to the holder of an extinguishing agent trading authorisation (EATA) for re-use or disposal.

Note: destruction of scheduled ODS and SGG extinguishing agents is only to be undertaken by an approved extinguishing agent destruction facility.

Transport of scheduled ODS and SGG extinguishing agents for disposal should be done in a manner that minimises the risk of any discharge. This includes making sure that:

- all actuators are removed from the container valves
- all container valve discharge outlets are capped. Caps should not obstruct the pressure relief devices
- containers are transported in accordance with the Australian Dangerous Goods Code and required state/territory dangerous goods legislation.

The National Halon Bank operates a free call service to advise on the disposal of halon, as well as other ozone depleting substances (ODS) and synthetic greenhouse gases (SGG). Call 1800 658 084 to arrange for the disposal of any unwanted halon or other ODS/SGG substances.



Section 10 – Appendix 1

Requirements for ODS and SGG extinguishing agent recovery and recycling equipment

Equipment used to recover, recycle and charge scheduled ODS or SGG extinguishing agents should comply with the requirements listed below.

1 Any equipment used to recover scheduled ODS and SGG extinguishing agent, whether for recycling or storage, should have the capability of a minimum rate of 95% recovery from the source container.

2 If the ODS and SGG extinguishing agent is being recovered as part of hydrostatic pressure testing or routine service requirements and is to be returned to the system from which it is recovered, it should be cleaned of particulates and moisture prior to refilling into the system containers.

If the ODS and SGG extinguishing agent is being recycled or reclaimed for re-use, it should conform to the original manufacturer's purity specifications.

3 All equipment should be leak free and a leak detector should be available to allow for leak testing before and during operation.

4 An emergency shut off procedure should be provided.

5 Safety and isolation equipment should be provided to prevent loss of scheduled ODS and SGG extinguishing agent to the atmosphere in the case of a malfunction.

6 The operating procedures should ensure that the maximum fill of each container does not exceed the limits specified in AS 2030.5 – Gas cylinders Filling, inspection and testing of refillable cylinders.

7 Personnel who use the equipment should be fully trained in its operation, including emergency shut off procedures.

8 Personnel who test and/or maintain the equipment should have a full knowledge of the equipment and associated regulatory requirements.

9 Containers used in the recovery and storage process up to 3000 kg should comply with AS2030.1:2 - 2019

> **Note:** the requirements for containers greater than 3000 kg are covered by other Australian Standards, e.g. AS1210 – Pressure vessels

10 All hardware within the transfer equipment should be compatible with the pressure and temperature requirements of the material to be recovered. This includes, but is not restricted to, filters and valves.

11 If the transfer equipment uses a pump, this pump should be able to handle both liquid and vapour.

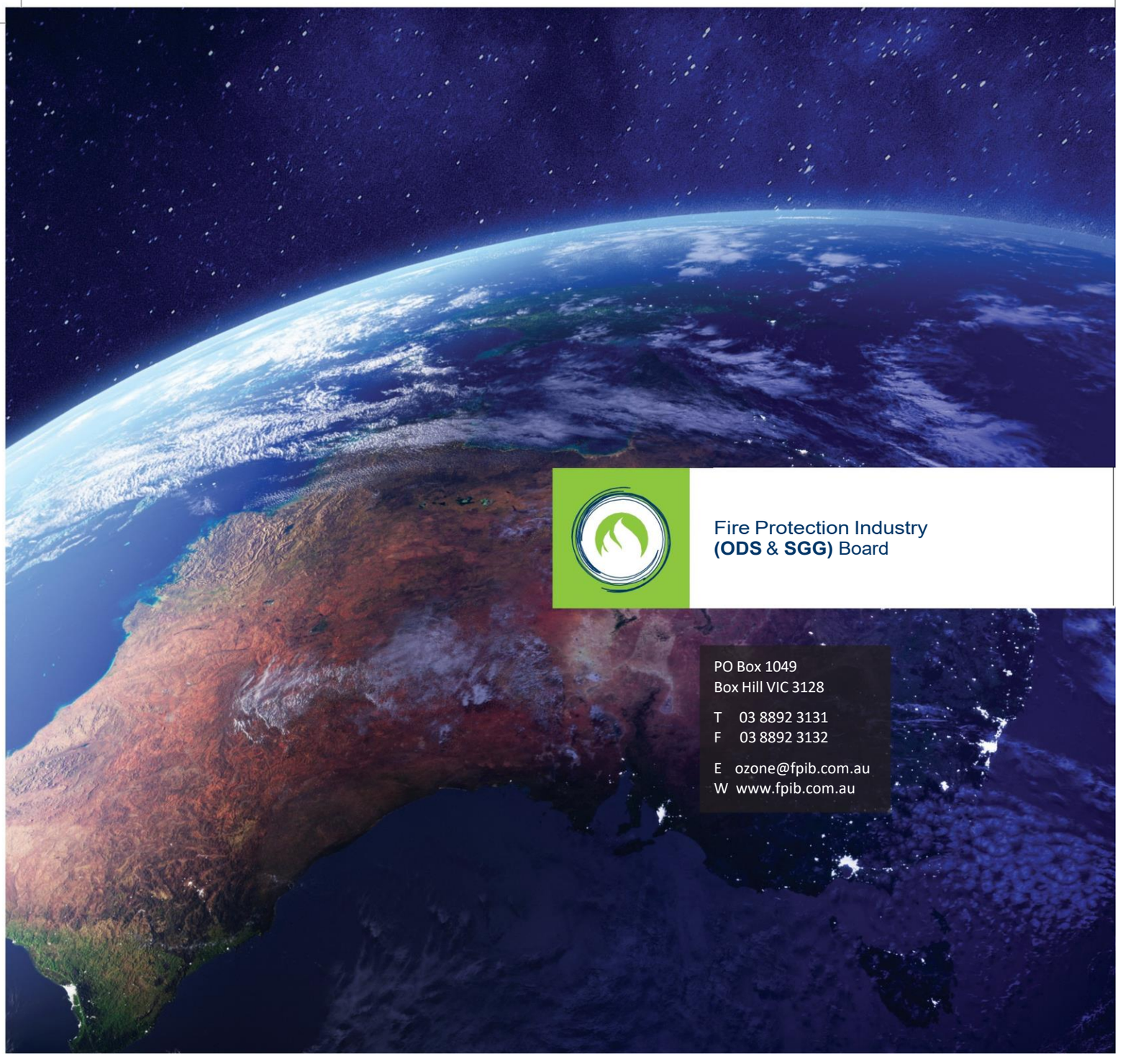
12 Transfer equipment should be capable of withstanding, without leakage or permanent deformation, a test pressure of not less than 1.5 times the anticipated normal working pressure.

Pipe runs should be as short as possible.

Hose, having a pressure rating at least twice the anticipated working pressure, may be used to make any necessary flexible connections.

The filling hose should be provided with a valve at the outlet end.

13 Equipment should be tested periodically (at least after every 100 hours of operation) to ensure no faults.



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