



Scheduled Extinguishing Agents in the Mining Industry

Fire protection equipment containing ozone depleting substances (ODS) and synthetic greenhouse gases (SGG) (scheduled extinguishing substances) used on mine sites is regulated under the *Ozone Protection and Synthetic Greenhouse Gas Management Act 1989 (the Act)* and the *Ozone Protection and Synthetic Greenhouse Gas Management Regulations 1995 (the Regulations)*.

Any persons that handle fire protection equipment containing or connected to scheduled extinguishing substances are legally required to hold a licence with the Fire Protection Industry (ODS & SGG) Board (FPIB). The FPIB administers the fire protection industry permit scheme on behalf of the Department of Agriculture, Water and the Environment.

Where are scheduled substances found in the mining industry?

Gaseous fire suppression systems and equipment are found in both underground and open-cut mines. Sites could have a combination of scheduled and non-scheduled gaseous fire suppression systems, depending on the risks associated at various sites.

They can be found safeguarding:

- heavy-duty mobile equipment
- control centres
- conveyor systems
- switch rooms
- auxiliary power supply facilities.

Gaseous fire suppression systems can also be installed on specific heavy-duty mobile plants, such as:

- bucket wheel excavators
- dump trucks
- hydraulic shovels
- haul trucks
- wheeled loaders

Prominent scheduled and non-scheduled substances used in the mining industry

Scheduled substances

The most used ODS and SGG scheduled extinguishing substances on mine sites include FM-200®, FE227™, NAF-SIII and NAF-PIII.

These substances are used because they:

- are non-conductors of electricity
- have favourable environmental properties
- are clean and leave no residue
- cause minimal damage to equipment.

Non-scheduled substances

Non-scheduled substances that are used in gaseous and non-gaseous fire suppression systems are excluded from the Act and Regulations and include:

- CO₂
- water-mist
- inert gases (nitrogen and argon).

Do you require a licence?

- Technicians installing, servicing, maintaining or decommissioning systems containing scheduled extinguishing substances must hold an **Extinguishing Agent Handling Licence (EAHL)**.
- Technicians or companies who buy, store and/or sell scheduled extinguishing substances must hold an **Extinguishing Agent Trading Authorisation (EATA)**.





Why are gaseous fire suppression systems important?

Gaseous fire suppression systems in both underground and open-cut mines are vitally important from the life safety standpoint, as are systems protecting below ground electrical installations.

Serious fires in mining facilities pose grave pollution threats to the environment; effective fire protection prevents environmental mishaps occasioned by uncontrolled fires in the mining sector.

The responsibility for fire safety on mine sites extends to every person on site including fire protection contractors tasked with inspecting, testing and maintaining fire protection systems and equipment, site staff, (both those directly involved with the mining operation as well as support staff) as well as guests and visitors to the site.

Everyone must be alert to the risks of fires and other special hazards on mine sites and be able to identify some key warning signs.

Your obligations

- Operators of mining sites with gaseous fire suppression systems containing scheduled extinguishing substances must ensure that the installation and maintenance of these systems is done by licensed technicians.
- All technicians working with scheduled extinguishing substances must hold the appropriate licence, authorisation or permit.
- Gaseous fire suppression systems must be regularly serviced and maintained to ensure full functionality in the event of a fire.

How to report a discharge of a scheduled extinguishing substance

All incidents involving the discharge of a scheduled extinguishing substance should be documented at the time and reported to the FPIB.

To complete a discharge notification form, please head to the FPIB website: www.fpiib.com.au

The form should be emailed to the FPIB via ozone@fpiib.com.au



The FPIB has produced a Good Practice Guide and a range of factsheets aimed at educating field practitioners in appropriate work practices to avoid unnecessary emissions of scheduled extinguishing substances. These can be found at www.fpiib.com.au. All technicians should be familiar with this guide and perform work according to the relevant Australian standards.

