

Pressurised gas and stored energy

Uncontrolled release of pressurised gas or stored energy poses a serious risk to nearby workers.



Cause #	Cause description
1	Incorrectly connected mixed gas lines.
2	Uncontrolled release of gas from cylinder damage, faulty equipment.
3	Imploding gas from chemical reaction.
4	Cylinder damage
5	Unattended chemical reactions in closed vessels (when storing and disposing).
6	Explosion of pressurised reaction vessels and other pressurised equipment.
7	Faulty equipment.
8	Transporting pressurised gas in vehicles.
9	Injection of high pressured gas/fluid e.g air guns, hoses.
10	Poisoning (CO, SO ₂ , CO ₂).
11	Lack of oxygen.

Preventive controls (reducing likelihood)	Critical/non critical	Cause #
(CC01) Structural integrity: Maintained across containment vessels, delivery lines valves and associated equipment that meet Australian Standard. Inspected according to schedule.	Critical	1 – 11
(CC02) Ventilation/fume cabinets: In place in SCU labs as required.	Critical	10
(CC03) Sensors and detectors: Installed and monitored with employees responding in the event of the sensor detects a substance above the maximum exposure levels.	Critical	1 – 11
(CC04) Isolation: Prior to working on all pressurised gas and stored energy, equipment it must be de-pressurised by isolating and locking out the equipment.	Critical	1 – 10
Regulation of poisonous gases (include in hazardous substances).	Non-Critical	1 – 11
Exclusion zones when transporting cylinders.	Non-Critical	8
Airline guns must have protectors and hard covers.	Non-Critical	9
Maintenance of pressure relief valves.	Non-Critical	2
Training/awareness provided to SCU employees.	Non-Critical	1 – 11
Security, and correct storage and handling.	Non-Critical	1 – 11
Ongoing inspection regime.	Non-Critical	4, 7, 8
Mitigating controls (reducing consequence)	Critical/non critical	Cause #
(CC05) Emergency response procedures.	Critical	1 – 11
Fire containment systems.	Non-Critical	6, 7, 11