HAZARD ALERT
Flammable Gas Release

DESCRIPTION

Flammable hydrogen gas was released during a routine task of changing over gas cylinders within a laboratory. A free-standing gas cylinder that wasn’t connected to a manifold or regulator, was accidently opened.

RISK RATING

Score: Extreme Risk
Explanation: Consequence = Major to Catastrophic (significant lost time injury/extremely serious/possible fatality)
Likelihood = Possible (might occur)

KEY LEARNINGS/ACTIONS FOR PREVENTION:

1. All hazardous operations including gas cylinder changeover must be performed during normal business hours when there is more support available in the event of an emergency. This needs to be included in the local after-hours procedure.

2. Gas cylinders that are not in use and do not have a regulator connected to them must not be stored in the laboratory, even for a short period of time. Refer to the Monash Gas Storage Compliance Chart. This eliminates the risk of accidental release of gases from cylinders without regulators.

3. A risk assessment must be completed prior to the use of high-pressure gases in laboratories or workshops, that includes the requirement for:
   a. Reticulation and/or storage of gases and the presence of atmospheric gas monitoring – flammable gas / oxygen depletion;
   b. Training requirements for operators (including the mandatory University Gas Cylinder and Cryogenics training, and specific local gas safety and emergency response procedures);
   c. Leak testing must be conducted every time the cylinder is re-connected i.e. during cylinder replacement;
   d. Local emergency procedures.

4. A safe work method statement must be prepared that fully details all the controls identified in the risk assessment.

5. An emergency response plan for all laboratories should be developed in consultation with the Building Warden, who needs to be informed of the specific hazards in the building. This must form a part of the local safety induction.

6. Ensure all staff and research students are aware of emergency response procedures including awareness of the location of break glass alarms. This must be included in the local safety induction prior to any work commencing.

7. Review gas storage compliance, and implement required corrective actions.

More Information:  Liz Holzschuster, Health Safety & Wellbeing Manager