# CONFINED SPACES & RESTRICTED WORK AREAS

#### **OBJECTIVE:**

The objective is to prevent harm to people working in confined spaces and restricted work areas to ALARP, including consideration in design for foreseeable human error.

#### **GENERAL OUTCOME:**

The intended design outcome should eliminate the need to enter confined spaces or restricted work areas.

Where elimination cannot be achieved, the intended design outcome should include consideration of the following:

- Reduce frequency of entering or working in confined spaces or restricted work areas
- Ergonomic positioning (fit-for-purpose)
- Adequate ventilation
- Adequate lighting
- Adequate access and egress, including rescue
- Protection from external hazards (heat, energy, noise, chemical, electrical) during installation, maintenance and operation



**8.1** Asphyxiation from irrespirable atmosphere due to lack of adequate ventilation.







# Potential Unwanted Events (PUEs)

8.2 Harm from excessive heat due to lack of adequate ventilation or proximity to heat radiating components.

#### **SURFACI**



Physical injury due to inadequate ergonomic design that restricts worker movement to perform work or access/egress.

SURFACE





UG COAL







**UG HARD ROCK** 



**EXPLORATION DRILLING** 



#### Potential Unwanted Events (PUEs)

8.4 Injury or illness from fire or chemical hazards due to the routing of hosing or piping within confined space.

SURFACE



UG COAL



UG HARD ROCK



**S** Burns from contact with hydraulic hoses or piping within confined space.

SURFACE







### Potential Unwanted Events (PUEs)

**8.6** Harm due to engulfment from materials or inundation by gas or liquids.

**SURFACE** 



#### **Potential Unwanted Events (PUEs)**

**8.7** Entrapment due to lack of alternate route of egress in an emergency.

SURFACE







**8.8** Harm due to rescue difficulties associated with difficult or minimal access.

SURFACE

