

Safety Global Standard

Purpose of Global Standard?

This Global Standard outlines the minimum safety requirements to understand, manage and, wherever possible, eliminate fatality risks in our business. Where elimination is not possible, we must make sure that robust and effective controls are identified with input from people exposed to the risk.

Who does this apply to?

This Global Standard applies to all BHP employees and contractors.

Please note: Internal approval thresholds are in line with the level of risk.

This document has been prepared for external publication and may restate or omit elements of the internal version for clarity or brevity (including omission of internal process specification or guidance). Our *Global Standards* are reviewed at least each 12 months, and so this external version may be periodically updated.

Global Standard Requirements

Safety risk management

Safety risk assessment

All Assets, Functions, and contractor partners must implement controls based on the assessment of the safety risks identified, prioritising higher-level controls on the hierarchy of control (elimination, substitution, separation, engineering, administrative, personal protective equipment) in:

- design, construction and procurement of new operations, facilities, technology and equipment.
- changes to existing operations, facilities and equipment.
- design, planning, scheduling and execution of work.

Training and competency

All Assets, Functions, and contractor partners must have systems and processes in place to identify, prioritise, plan, document and monitor the fulfilment of safety training and competency needs.

Field leadership

Line leaders must integrate the four layers of field leadership engagement into core routines at all operations, metals exploration and projects to help improve health, safety and environmental leadership, culture and performance.

Management of change

All Assets, Functions, and contractor partners must have a management of change (MOC) process for personnel to follow that defines:

- The criteria for identifying the types of change that require a MOC process.
- How to evaluate the impacts of a change, including requirements for risk assessments, which must involve people who understand the change and the risks associated with introducing the change.
- Approval processes for different types of changes, including criteria to be considered before approving a change.
- Documentation and record requirements, which must contain approval and rejection decisions.
- Communication requirements for all stages of the MOC process.
- Requirements for monitoring change from initiation to full implementation.
- The MOC training requirements including how to identify, evaluate, approve, document, communicate and monitor changes.

Process safety material risks

Process safety is a disciplined framework for managing the integrity of hazardous operating systems and processes by applying good design principles, engineering, and operating practices. It covers prevention and control of incidents that have the potential to release hazardous materials or energy that could cause toxic effects and fire or explosion, which may result in fatalities, property damage, lost production, and environmental impact.

You must apply the minimum requirements for process safety material risks (as defined by BHP's Risk Framework) if you have identified:

- a loss of primary containment / process fire and explosion risk as a material risk in your safety risk assessment;
- a potential loss of primary containment of hazardous materials greater than the agreed threshold quantities in any one-hour period; or
- the potential for a fatality from loss of primary containment of the materials.

When designing, constructing or modifying process safety related operations, facilities, plant, equipment or systems:

- Identify the potential for a fatality from loss of primary containment of hazardous materials and put in place controls that prevent or mitigate loss of containment.
- Apply inherent safety in design principles.
- Do a Process Hazard Analysis (PHA) (including a technical assessment of consequence) with personnel who understand the process, equipment and the associated process safety risks.
- Use the PHA and the hierarchy of control to identify controls to manage loss of primary containment hazards demonstrating that risks are tolerable and are managed as far as is reasonably practicable.
- Verify operational readiness (including effectiveness of Controls) and integrity of new or modified process safety plant, equipment, systems and procedures before use.

When managing process safety risk:

- Identify critical operational and leadership roles and make sure there are trained and competent personnel to manage process safety risks and activities.
- Develop, implement and review key risk and performance indicators.
- Implement scenario-based emergency response plans (ERPs).
- Implement, monitor, manage changes and verify controls identified by the PHA to prevent and mitigate loss of primary containment of hazardous materials.
- Review the PHA at least every 5 years, or when prompted by significant events or the MOC process.
- Identify, report, investigate and learn from process safety events.
- Implement a process safety assurance/monitor and verification regime to ensure compliance with the process safety requirements.

When operating process safety plant, equipment and systems:

- Operate plant within defined safe operating limits (SOLs) and monitor, investigate and respond to excursions outside of the SOLs.
- Document operating procedures for critical process safety operations.
- Identify and control process safety critical documents and information.
- Select, use, store and manage the presence of flammable/combustible materials and control potential ignition sources to reduce risk of fire and/or explosion.
- Use gas and fire detection to identify hazardous atmospheres and fires to allow prompt, effective response and evacuation.
- Make sure engineering controls are uniquely identifiable and have strategies for inspecting, maintaining, and integrity testing.
- Define and implement shift operational handover processes including the review and status of process safety issues.

Occupational safety material risks

If you have identified these occupational safety risks as material (as defined by BHP's Risk Framework) through your safety risk assessment above, then you must apply these minimum requirements:

Confined space risks

- Align risk assessments and performance standards with the minimum critical control requirements.
- Set criteria for a safe work environment within the confined space.
- Monitor, for the duration of the work activity, atmospheric contaminants and oxygen (including before entry) and personnel.
- Assess and use respiratory protective equipment where a safe atmosphere cannot be established.
- Provide a rescue plan specific to the confined space conditions, before entry.

Electrical risks

- Working on or near energised electrical equipment (or part of) at low voltage and above must be carried out with the equipment isolated unless a competent electrical person has assessed that:
 - the work cannot be carried out effectively if the installation is de-energised;
 - the health and safety of personnel would be put in imminent and significant danger if the installation (or part of) was de-energised to do the work; or
 - it is not possible to test, measure the performance of, or detect/locate faults or defects in the electrical installation, or the part of the installation, unless it is energised.
- Where it has been assessed that equipment cannot be isolated to carry out work, then a task-based risk assessment and safe work instruction (or equivalent) must be developed and approved by a competent electrical person.
- Make sure all tools that are used for electrical work are insulated, compliant with the International Electro-technical Commission (IEC) standard [IEC 60900](#) or equivalent.
- Make sure test and measuring equipment meets CAT III or CAT IV as applicable.
- Make sure personnel operating or working on or near electrical equipment are trained and verified as competent.
- Develop and maintain a network model and protection settings to support the calculations needed for an Arch Flash Hazard (AFH) assessment.
- Label electrical equipment with hazard severity and arc flash PPE requirements when working near, operating on, or maintaining electrical equipment.
- Make sure that all new and replacement switchboards (excluding partial switchboard replacements) purchased meet agreed requirements.
- Make sure that all new and replacement plant and equipment purchased include:
 - External test facilities that permit safe and periodic verification of residual current device (RCD) operation without the need to open switchboards and expose live equipment.
 - Lighting fixtures with fixed wiring sub-circuits rated at ≤32 Amps a.c. have a 30mA RCD or ground fault circuit interrupter protection (GFCI).
 - Use of extra low voltage for field devices (e.g. 24 Volts direct current (d.c) control voltage) for control systems. Where this is not Reasonably practicable, do a risk assessment and put risk reduction measures in place.
 - Portable hand tools and temporary lighting are battery-powered, where reasonably practicable.

Entanglement and crushing risks

- Separate personnel from entanglement and crushing hazards through guarding or electrical interlocking. Where this is not reasonably practicable, control and monitor access to plant or equipment.
- Only allow the removal of guards after plant and equipment has been isolated. Where the temporary removal of guards is necessary on operating plant and equipment, do a risk assessment, put additional controls in place and have this signed off by manager level equivalent or above.

Dropped and falling object risks

- Separate and protect personnel from objects that have the potential to drop or fall from height through plant and equipment design where it is reasonably practicable.
- Assess and control dropped and falling object hazards, including:
 - before working within and under structures where there is potential for product to become dislodged and fall due to material build up.
 - before, during and after doing work at height tasks.
 - before, during and after working above or below other workgroups or work activities.

- Do a periodic evaluation that involves identifying dropped and falling object hazards in high exposure locations and risk assess these against the hierarchy of control and implement the highest-level preventative or mitigating controls where reasonably practicable.

Person(s) falling from height risks

- Align risk assessments and performance standards with the minimum critical control requirements.
- Provide a secure working area and maintain the structural integrity to bear the design load (including fixed and temporary walkways, platforms and mobile access platforms).
- Only use ladders without a designated work platform for access and egress. If the task is unable to be performed using a platform, then do a risk assessment, put additional controls in place to prevent a fatality from falling at height and have this signed off by manager level equivalent or above.
- Use fall prevention or arrest systems if a secure working area cannot be established. Before using the fall prevention or arrest system:
 - assess the integrity of the fall prevention or arrest system (including anchor points and accessories).
 - provide a rescue plan specific to the activity.
- Do a periodic evaluation of operational areas where working at height tasks are done and risk assess these against the hierarchy of control and implement the highest-level preventative or mitigating controls where reasonably practicable.

Lifting and crane risks

- Align risk assessments and performance standards with minimum critical control requirements.
- Make sure suspended loads are not directly handled by personnel (i.e. are hands-free). If this is not reasonably practicable, then do a risk assessment, put additional controls in place to prevent a fatality and have this signed off by manager level equivalent or above.
- Use cranes with devices that detect and limit the potential for overload through an interlock system. Where interlocks are not in place:
 - do a gap analysis and develop an implementation plan for interlock devices to be used on all cranes by 1 July 2025, including who is accountable for implementation and timeframes for completion.
 - monitor and verify execution of the implementation plan.
- Make sure personnel are trained and verified as competent to perform lifting and crane work activities.
- Categorise all lifts based on the level of risk present, and have lift plans for each category that are appropriate to the level of risk.
- Have a single-point of accountability (SPA) assigned for all lifts and clearly define the SPA roles and responsibilities, including responsibility for monitoring the lift activities to make sure the lift is performed in accordance with lift plan requirements.

Vehicles and Mobile Equipment risks

The requirements below are applicable to all surface locations. Underground locations must risk assess and implement these where applicable in accordance with local operating environments and regulatory requirements.

Road design and management

- Define and document the requirements and accountability for the design, maintenance and construction of roads that are controlled by BHP.
- Make sure intersections are risk assessed and:
 - Designed to achieve safe intersection stopping distance, supported with reduced intersection speed limits.

- If intersections are used by heavy mobile equipment, they are designed to minimise four entry-points (four-way intersection). If it is not reasonably practicable to remove four-way intersections, the intersection must be designed and constructed to minimise the number of possible collision points.
- Have light vehicle segregation areas in place for all roadways where it is reasonably practicable to segregate light vehicles from heavy mobile equipment.
- Risk assess and design heavy mobile equipment parking bays to minimise the interaction risk between pedestrians and heavy mobile equipment.
- Identify and control the impacts of environmental conditions that pose safety hazards including dust, fog and water.
- Make sure mobile equipment is unable to move when it is parked by using two methods that prevent uncontrolled movement.
- Where there is fatality potential, make sure roadside edge protection is in place to prevent vehicles and mobile equipment travelling over an edge, including ensuring that protection is:
 - designed and constructed in accordance with local or international engineering design where this exists.
 - geometrically surveyed on a regular basis to verify it meets the design.
- Where reasonably practicable, make sure that all equipment that works at an open edge or void with fatality potential has engineered edge protection. If engineered edge protection is not reasonably practicable, implement one of these controls:
 - technology that assists the operator in maintaining effective visibility of the edges; or
 - technology that allows for remote operation of the vehicle.
- Where reasonably practicable, make sure pedestrians and mobile equipment are separated through physical segregation.
 - If physical segregation is not reasonably practicable, a separation distance with mobile equipment must be maintained, including:
 - for heavy mobile equipment the minimal distance is 50 metres unless the equipment is immobilised.
 - for non-heavy mobile equipment, the minimal separation distance is 10 metres unless the equipment is immobilised.
 - If physical segregation and separation distances cannot be maintained:
 - do a risk assessment, put additional controls in place and have this signed off by a manager level equivalent or above.
 - implement pedestrian detection and alert technology systems where this is reasonably practicable.
- Where reasonably practicable, make sure heavy mobile equipment is separated from other vehicles through physical segregation.
 - If physical segregation is not reasonably practicable, then vehicles must maintain a 50-metre separation distance unless positive communication has been achieved between all involved persons and non-autonomous equipment.
 - If physical segregation, separation distance or positive communication cannot be maintained:
 - do a risk assessment, put additional controls in place and have this signed off by a manager level equivalent or above.
 - implement collision awareness systems where this is reasonably practicable.

Vehicle design and management

- Risk assess and limit the number of light vehicles that can enter locations with heavy mobile equipment.
- Control the access of light vehicles and personnel into active mining areas.

- Implement an authorisation process for drivers and monitor compliance to this.
- Make sure drivers hold relevant local licences and are trained and verified as competent for the operating conditions.
- Require all occupants in a vehicle to wear a seat belt at all times while the vehicle is in operation/motion and in accordance with the original equipment manufacturer (OEM) design.
- Do a journey risk assessment, choose an appropriate vehicle for the journey (i.e. for the road conditions, environment and duration) and implement a journey management plan (that controls the identified risks) for:
 - all high occupancy vehicles (HOV).
 - other high risk vehicle journeys offsite (defined through a local risk assessment).
- Maintain all vehicles to OEM recommendations. If modifications are made outside of OEM recommendations, then a risk assessment must be done (that demonstrates there is no increased safety risk) and signed off by a manager level equivalent or above.
- Prohibit installation of aftermarket modifications or equipment that could negatively impact the safety features of the vehicle.
- Require all BHP and contractor light vehicles (LV) and HOVs to meet agreed requirements.
- When the LV and HOV agreed requirements are not met or if modifications are made:
 - Do a risk assessment and determine if the vehicle can be used to perform work for BHP.
 - If the vehicle will be used to perform work for BHP, implement appropriate Controls to manage the risk and get approval for LVs¹ or get approval for HOVs².

Geotechnical risks (including fall of ground)

- Separate and protect personnel from ground, excavations, waste dumps and stockpiles with the potential to:
 - slip, fall or collapse (e.g., open pits, shafts, stopes);
 - impact other excavations (e.g., stope close to a shaft);
 - impact civil facilities (e.g., pushback close to plant);
 - impact natural systems (e.g., open pit border close to a river); or
 - be impacted by natural systems (e.g., shaft flooding due to groundwater flows).

Non-process fire and explosion risks

- Select, use, store and manage the presence of flammable/combustible materials and control potential ignition sources to reduce risk of fire and/or explosion.
- Use gas and fire detection to identify hazardous atmospheres and fires to allow prompt, effective response and evacuation.

Control systems / processes across multiple material risks

If you have identified these control systems/processes within a risk assessment for one or more safety material risks (as defined by BHP's Risk Framework), then you must apply these minimum requirements:

Permit to work

- Implement a permit to work process for:
 - the removal of handrails or gridmesh;

¹ A light vehicle (LV) has at least four wheels and is a road going vehicle with the capacity to carry and seat a maximum of 8 people or capacity to carry goods with a gross vehicle mass not exceeding 3.5 tonne. Note that underground light vehicles may exceed the mass limit in accordance with local requirements

² A high occupancy vehicle (HOV) is a vehicle that can carry 9 or more people

- confined space entry;
 - hot work;
 - breaking containment of process systems containing hazardous materials;
 - work on high voltage (more than 1000 volts alternating current or as defined in local legislation) electrical equipment; or
 - simultaneous work activities that have the potential to cause fatalities.
- Identify, train and authorise people that issue, authorise and hold permits, while maintaining segregation of duties between people that authorise and hold permits.
- Authorise permits before commencing work and for suspension, handover, hand-back and changes to scope of work.
- Track permits including status and location and make open permits accessible to all affected personnel.

Isolation

- Implement an isolation process that includes:
 - Identification of sources of energy and hazardous materials that require isolation.
 - Identification of isolation points, the method of isolating these points and those that require independent verification and authorisation.
 - Identification, training and authorisation of personnel who can authorise, perform and verify isolations. The role required to perform an isolation must be independent of those required to authorise and verify isolations.
- Establish and maintain unique and identifiable, secure, and personal control of the point of isolation for all personnel affected by the isolation.
- Authorise the application of overrides, bridges and bypasses to isolation or interlock systems.
- Test plant and equipment to confirm that sources of energy are isolated. Complete independent verification for isolations that are required to be independently verified.
- Authorise suspension, handover, de-isolation, and changes to scope of work.
- Return isolated plant and equipment to a safe operating condition before it is commissioned for use.