

Health Global Standard

Purpose of Global Standard?

This Global Standard outlines the minimum requirements which must be complied with for to identify and manage BHP health risks and impacts to employees, contractors and the community.

Who does this apply to?

This Global Standard applies to:

- All employees and contractors across our operations / Assets / Regions / Functions.
- Anyone involved in managing the health and wellbeing of our employees and contractors across our operations / Assets / Regions / Functions.
- Anyone involved in evaluating the potential health and wellbeing impacts of our operations on communities.

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

Health risk management

Operations must incorporate elements below into health risk management processes and systems.

Health risk assessment

- Identify all health-related physical and psychosocial risk events with the potential to result in a fatality, chronic life-threatening, or life-altering or permanently disabling illness.
- Assess and implement controls for all identified health risks that:
 - use approved assessment, analysis and control methodologies in Appendix 1.
 - meet the minimum requirements in the management of health risks section (below).
 - account for extended work shifts, work rosters and combined exposures.
- Establish a qualitative and/or quantitative exposure risk profile using the American Industrial Hygiene Association's 'A Strategy for Assessing and Managing Occupational Exposures' and review this when there is a risk relevant change.
- Notify the BHP global function Health and Hygiene team if a review of the exposure risk profile identifies certain agents with exposures >50% of occupational exposure limit (OEL) for >100 workers when aggregated at an asset level.

Health and hygiene records and communication

- Store all personal information containing health, hygiene and medical records in a single central records management system.
- Communicate the results of health surveillance, hygiene monitoring results and routine, periodic medical assessments directly undertaken by BHP to the individual involved.
- Communicate qualitative and quantitative exposure assessment and health surveillance results with appropriate de-identification and aggregation to exposure groups, leaders, and contract owners / contract owner representatives. The effectiveness of controls must be reviewed.

Community health¹

- When an environmental risk assessment, a community and human rights impact and opportunity assessment or a capital project risk assessment identifies that an actual or reasonably foreseeable event may result in a community health impact, then assess human health risks from environmental impacts in non-occupational settings using:
 - [US Environmental Protection Agency \(EPA\), Human Health Risk Assessment](#); or
 - Health (Australia), [Environmental Health Risk Assessment – Guidelines for assessing human health risks from environmental hazards](#).

Drinking (potable) water contamination²

- Where applicable, operate, or ensure that any drinking water systems are operated, within pre-defined quantity and quality ranges.

Management of health risks

- Based on the exposure risk profile, follow the hierarchy of controls to reduce exposures to as low as reasonably practicable. Also apply the hierarchy of controls when:
 - designing, constructing and procuring new operations, facilities, technology and equipment.

¹ Full compliance with the requirements in the section 'Community health' is required by 1 July 2024.

² Full compliance with the requirements in the section 'Drinking (potable) water contamination' is required by 1 July 2024.

- changing existing operations, facilities and equipment.
 - designing, planning, scheduling and executing work.
- When exposure exceeds the OEL, is qualitatively assessed to exceed 50% of the OEL for carcinogens, exposure exceeds or is qualitatively assessed to exceed the OEL for all other agents, or the health risk event exceeds the relevant standard where an OEL does not apply:
 - prioritise exposure controls on the basis of potential health consequences, the number of people exposed and the magnitude of exposure reduction.
 - require the use of personal protective equipment (PPE) in accordance with a recognised standard.
- When exposure is assessed as potentially exceeding 50% of an OEL and where there is a recognised standard for medical surveillance protocol, do baseline (at pre-employment/engagement or within three months of commencement) and periodic medical surveillance to identify potential illnesses at an early stage:
 - in the case of acute agents, for all personnel; or
 - in the case of chronic agents, for employees and for contractors who are intended to be engaged for one or more years; and
 - do biological monitoring as part of the medical surveillance program using the methodology in Appendix 1.

Airborne contaminants³

- Where reasonably practicable, implement real-time monitoring where exposures exceed or could potentially exceed OELs.
- Where tight fitting respiratory protection is required due to the task requirements or due to exposure levels above the OEL or due to exposures to carcinogens qualitatively assessed as exceeding 50% of OEL, do personal fit testing in accordance with a recognised standard at commencement of employment/engagement and periodically at least every two years.

Carcinogenic airborne contaminants

- When there is potential for occupational exposure to carcinogens, including levels below the OEL:
 - make sure personnel know at commencement of employment or the relevant engagement about the potential health hazards and exposure controls, and remind them of this at a frequency based on the risk.
 - make sure personnel know that PPE is available for voluntary use (where use is not mandatory) and when PPE is requested, provide training on proper use.
 - require the use of powered air-purifying respirators (PAPR) for welding activities.

Extreme temperatures⁴

- Implement a management plan that aligns with the methodology in Appendix 1 including:
 - engineering controls to provide a cooler or warmer workplace where reasonably practicable.
 - safe work practices to reduce personnel exposure to extreme temperatures.
 - consideration for travel in locations with extreme temperatures.
 - training of personnel to recognise and prevent illness due to extreme temperatures.

Musculoskeletal hazards⁵

- Using an evidence based approach, make sure the following factors (including their interactions) are considered when controlling musculoskeletal hazards:
 - physical and biomechanical.

³ Compliance with the requirements for real-time monitoring where exposures exceed or potentially exceed OELs and for the use of PAPR for welding activities is required by 1 July 2024.

⁴ Full compliance with the requirements in the section 'Extreme temperatures' is required by 1 July 2024.

⁵ Full compliance with the requirements in the section 'Musculoskeletal hazards' is required by 1 July 2024.

- organisational, task and design.
- environment and individual.

Noise hazards

- When noise exposures are assessed using the methodology in Appendix 1 as exceeding or are likely to exceed the OEL:
 - Implement a noise control management plan that uses a recognised standard and includes:
 - o identification of work areas, tasks and equipment (including hand-tools) that require the use of hearing protection.
 - o communication of hearing protection areas, tasks and equipment (including the use of clearly displayed signage).
 - o implementation of fit testing of hearing protection that complies with a recognised standard.

Psychosocial hazards⁶

- Engage an approved competent person to complete psychosocial risk assessments.
- Based on the outcome of the initial psychosocial risk assessment, determine whether current controls are adequate or need improvement.
- Review any improvement plans annually and include a psychosocial risk assessment of new, or changes to, psychosocial hazards.

Fitness for work

- Identify roles which require a “fitness for work” medical assessment based on risk, taking into account the work to be performed and the work environment.
- Determine the frequency of assessment based on the likelihood of change in health status that may impact a worker's ability to undertake such roles.
- Implement an evidence-based medical assessment process specific to the roles identified that indicates whether a worker is fit, fit subject to reasonable adjustments or unable to meet inherent requirements of the role.

Fatigue management

- Implement a fatigue risk management plan.

Drugs and alcohol⁷

- Implement a risk-based workplace drug and alcohol program that includes:
 - controls to address the health and safety impacts from alcohol and all drugs.
 - processes for:
 - o declaring medications that may impact fitness for work.
 - o managing the potential impacts of declared medications.
 - an evidence-informed maximum daily limit of alcohol when alcohol is:
 - o supplied or paid for by BHP;
 - o consumed on company premises (including villages);
 - o consumed when travelling for work purposes; or
 - o consumed when representing the company.

⁶ Full compliance with the requirements in the section ‘Psychosocial hazards’ is required by 1 July 2024.

⁷ Compliance with the requirements for processes for declaring medications and managing their potential impacts and for implementing a quit smoking program and risk assessment of the viability of implementing a no-smoking policy is required by 1 July 2024.

- where smoking is identified to increase the health risk posed by potential exposure to airborne contaminants:
 - o implement a quit smoking program to support workers to stop smoking.
 - o risk assess (considering both threats and opportunities) the viability of implementing a no-smoking policy, and where viable, incorporate implementation of a no-smoking policy into the subsequent five-year plan.

Travel health⁸

- Before travelling internationally for BHP work:
 - Check International SOS (ISOS) and internal guidance for the medical requirements and the medical risk rating of the destination country and implement controls for each journey.
 - Complete all relevant medical requirements (including vaccinations and medical supplies) for the destination country and the host location.
- If travelling regularly to a high medical-risk destination:
 - Complete a pre-travel health assessment with a travel health professional before your first trip.
 - Repeat the health assessment at least every two years unless a more frequent health assessment is required based on the medical risks of subsequent destinations.

Case management⁹

- Make sure medical and allied health treatments are available for work-related injuries and illnesses.
- Optimise return to work outcomes through early reintegration into the workplace by:
 - Making reasonable adjustments, based on medical and allied health advice. Where reasonable adjustments cannot be made, consider suitable alternative duties to the extent that is reasonably practicable and in consultation with the individual concerned and their line leader.
 - Considering psychosocial factors to identify and address those factors that are known to prolong timely recovery or return to work.
 - Integrating person centred care into case management.

⁸ Full compliance with the requirements in the section 'Travel health' is required by 1 July 2024.

⁹ Full compliance with the requirements in the section 'Case management' is required by 1 July 2024.

Appendices

Appendix 1 – Methods of assessment, analysis and control

Issue/Agent	Use an assessment methodology that is consistent with:
Aerosol sampling	• ISO TR 7708:1995 Air quality - Particle size fraction definitions for health-related sampling. • UK Health & Safety Executive, Health and Safety Laboratory MDHS 14/4: General methods for sampling and gravimetric analysis of respirable, thoracic and inhalable aerosols. • ISO 10882-1 Second edition 2011-1—01: Health and safety in welding and allied processes – Sampling of airborne particles and gases in the operator's breathing zone – Part 1 Sampling of airborne particles.
Biological monitoring	• American Conference of Governmental Industrial Hygienists 'Introduction to the Biological Exposure Indices © (BEI)' or ACGIH Biological Exposure Indices © or another recognised index.
Chemical analysis of samples	• US National Institute for Occupational Safety and Health, Manual of Analytical Methods. • UK Health and Safety Executive, Methods for the Determination of Hazardous Substances. • US Occupational Safety and Health Administration, Sampling and Analytical Methods. • ISO 15202 series, Workplace air – Determination of metals and metalloids in airborne particulate matter by inductively coupled plasma atomic emission spectrometry.
Comparing exposure to OELs	• Chronic agents: If the exposure is log-normally distributed, use Land's 95% upper confidence limit (UCL) of the arithmetic mean estimate. If the exposure is not log-normally distributed but is normally distributed, use the 95% UCL of the arithmetic mean exposure. • Acute agents: Use the 95th percentile of the exposure distribution. • In the event of incomplete quantitative data, professional judgement of an occupational hygienist is required based on observations and understanding of the work environment.
Ionising radiation	• International Atomic Energy Agency, Radiation Protection and Safety of Radiation Sources: International Basic Safety Standards - Interim Edition General Safety Requirements Part 3. IAEA Safety Standards Series No. GSR Part 3 issued 2014.
Noise	• Calculate the A-weighted noise exposure level normalised to an eight-hour working day daily noise exposure level as defined in Section 3.2 of ISO 9612:2009 Acoustics - Determination of occupational noise exposure - Engineering method.
UV radiation	• US EPA, UV index.
Vibration	• Directive 2002/44/EC of the European Parliament and of the Council of 25 June 2002 on the minimum health and safety requirements regarding the exposure of personnel to the risks arising from physical agents (vibration). • HSE vibration calculator: Hand-arm vibration exposure calculator, Whole body vibration calculator.
Issue/Agent	Use a control methodology that is consistent with:
Asbestos	• Government of Western Australia, Management of fibrous minerals in Western Australian mining operations. Asbestos management program based on a recognised standard.
Diesel particulate	• For underground operations follow the International Council on Mining and Metals Innovation for Cleaner Safer Vehicles DPM Maturity Framework to guide application of hierarchy of controls. ICMM - Diesel Particulate Matter (DPM).

Issue/Agent	Use an assessment methodology that is consistent with:
Heat	• Australian Institute of Occupational Hygienists A Guide to Managing Heat Stress: Developed for Use in the Australian Environment; or • Thermal Work Limit (TWL) (see Brake and Bates, Limiting Metabolic Rate (Thermal Work Limit) as an Index of Thermal Stress, Applied Occupational and Environmental Hygiene, Volume 17(3): 176–186, 2002); or • An alternate recognised methodology, where a risk assessment has identified an equivalent or better level of protection for personnel than that provided by TWL.
Cold	• Canadian Centre for Occupational Health and Safety Cold Environments - Working in the Cold: OSH Answers (ccohs.ca)