

**NSW
Resources
Regulator**

○ GUIDE

Health control plan

A PRACTICAL GUIDE TO HEALTH CONTROL PLANS FOR THE NSW
MINING AND PETROLEUM INDUSTRY



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Disclaimer: The information contained in this publication is based on knowledge and understanding at the time of writing (January 2018). However, because of advances in knowledge, users are reminded of the need to ensure that information upon which they rely is up to date and to check currency of the information with the appropriate officer of the NSW Department of Planning and Environment or the user's independent advisor.

○ Foreword

This document incorporates and updates the NSW Mine Safety Advisory Council's Health management plan - a guide to the development and implementation of a health management plan in the NSW mining and extractives industry.

The aim of this document is to assist mine and petroleum site operators to develop a health control plan (HCP). It provides practical guidance to operators and other persons conducting a business or

undertaking (PCBU) at a mine or petroleum site on how to systematically manage health risks in the workplace. This advice will help PCBUs to comply with legislation and ensure the health and safety of workers and visitors.



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Health control plans

WHAT IS A HEALTH CONTROL PLAN?

A health control plan (HCP) sets out how the operator will manage the risks to health associated with their mining or petroleum operations, as required by clause 26 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014 (WHS (M&PS) Reg).

The HCP forms part of the safety management system (SMS). A HCP identifies the hazards which present a risk to health of workers and measures to control them.



MATTERS TO BE ADDRESSED IN THE HEALTH CONTROL PLAN

The health control plan must address a range of matters¹, specifically, how the operator will:

- > implement, maintain and verify controls that effectively manage the risks associated with the site's health hazards
- > ensure worker fitness for work including measures to minimise risks associated with environmental hazards, fatigue and drugs and alcohol
- > undertake exposure monitoring for the existence of health hazards
- > undertake health monitoring of workers exposed to health hazards
- > manage health records of workers.

¹ As set out in Schedule 2 of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.

Table 1: Outlines what to consider when addressing the required matters.

MATTER TO BE ADDRESSED	WHAT THIS MEANS?	HOW DO I DO THIS?
<p>(a) The control measures for eliminating or minimising the exposure of workers to health hazards associated with mining operations or petroleum operations at the mine or petroleum site such as dust, noise, hazardous substances, contaminants (airborne or otherwise), ultraviolet and ionising radiation and vibration.</p>	<p>What are all the different control measures that you use to ensure the health of your workers? This will include any safe work procedures but also other things – for example a quarry operator might have decided to minimise manual handling risks by only using light weight screens. It is important to include this so you can make sure it remains an effective control.</p> <p>The hazards listed are some of the most common health hazards but you may have others e.g. manual handling hazards. If so you must include the control measures used to manage the risks associated with those hazards as well.</p>	<p>Under clause 9 of the WHS (M&PS) Reg and clause 36 of the WHS Regulation PCBUs, including the operator and other PCBUs are required to work through the hierarchy of controls when managing risk. There are many ways to control risks. Controlling the risk directly by designing out the hazard (higher order control) is generally more effective than lower order controls such as relying on personal protective equipment, or administrative control measures such as relying on appropriate and compliant worker behaviour.</p> <p>You must use the highest level control that is reasonably practical. This could involve a single control measure or a combination of controls that together provide the required level of protection. Sometimes a single control is not adequate on its own to control a risk under all foreseeable circumstances, or if the reliability of a single control is uncertain.</p>
<p>(b) The control measures to ensure that persons working at the mine or petroleum site are fit to carry out that work without causing a risk to their own or others’ safety including the control measures for minimising the risk that a worker will be impaired by fatigue, extremes of temperature, moisture content of air or intoxication by alcohol or drugs.</p>	<p>‘Fitness for work’ has been described as: “a person is in a physical and psychological state which enables them to perform their work tasks competently and in a manner which does not affect their health, safety or wellbeing, or that of others” (Poteri, 2012)².</p>	<p>As outlined previously, controls must be based on the hierarchy of controls. The hierarchy of risk control ranks the effectiveness of controls from the highest level of protection and reliability (most effective) to the lowest (least effective) to either eliminate or minimise risks.</p>

² Poteri, A. 2012. *Fitness for Work*. Lexis Nexis, Sydney.

MATTER TO BE ADDRESSED	WHAT THIS MEANS?	HOW DO I DO THIS?
<p>(c) The monitoring of the existence of the health hazards associated with mining operations or petroleum operations at the mine or petroleum site and the exposure of workers to those hazards.</p>	<p>This part is focused on ongoing monitoring of the work environment to identify new hazards and to assess levels of existing hazards, for example air monitoring to measure the levels of silica or other contaminants.</p> <p>Through your risk management process you must identify the hazards that exist and establish a monitoring program as part of the health control plan. This involves understanding what needs to be monitored, establishing an appropriate exposure monitoring system, and comparing the results of the program to appropriate standards.</p> <p>An appropriate monitoring system means:</p> <ul style="list-style-type: none"> > Adjusting exposure standards for extended shifts to take into account the longer exposure time > Accessing information on exposure standards (approximately 700 substances including airborne contaminants have exposure standards) > PCBUs must not let their workers be exposed above exposure standards and exposures should be kept as low as reasonably practicable. 	<p>The exposure standards are set by Safe Work Australia and this information can be located in the Hazardous Chemical Information System (HCIS). There are three forms to the exposure standard which is dependent on the effect it may have on an individual's body, these include:</p> <ul style="list-style-type: none"> > eight-hour exposure standard which calculates the concentration over an eight-hour day five days per week > short term exposure limit (STEL) which is calculated over a 15 minute period with a number of rules, which outlines exposure over an eight-hour shift > peak limitation which is the maximum dose or concentration that cannot be exceeded at any time. <p>To comply with the model WHS Regulations, businesses may need to monitor workers' exposure to airborne contaminants if:</p> <ul style="list-style-type: none"> > there is uncertainty whether or not the exposure standard has been or may be exceeded > it is necessary to work out whether there is a risk to health. <p>Records of air monitoring must be kept for a minimum of 30 years and must be made available to workers who are exposed.</p> <p>Occupational hygienists can advise on monitoring programs. For more information about exposure standards and occupational hygienists you can view a video presentation "Workplace exposure standards and how to use them" and occupational hygienists as part of the SafeWork Australia virtual seminar series. www.safeworkaustralia.gov.au/media/workplace-exposure-standards-and-how-use-them</p> <p>For more information with regards to the exposure standard please refer to the Workplace exposure standards for airborne contaminants.</p>

³ Exposure standards do not identify a dividing line between a healthy or unhealthy working environment due to natural biological variation of individual.

⁴ Exposure standards establish a statutory maximum upper limit. However, some workers might experience adverse health effects below the exposure standard because they are more susceptible to health effects of the hazard. Therefore, exposure standards should not be considered as representing an acceptable level of exposure to workers.

MATTER TO BE ADDRESSED	WHAT THIS MEANS?	HOW DO I DO THIS?
<p>(d) The arrangements for monitoring the health of workers at the mine or petroleum site.</p> <p>Health monitoring requirements apply under the WHS Regulation. Operators should include arrangements for complying with the WHS Regulation requirements for health monitoring in their health control plan.</p>	<p>Health monitoring means monitoring a person to identify changes in the person’s health status because of exposure to certain substances. See Safe Work Australia: Health Monitoring for Exposure to Hazardous Chemicals guide for persons conducting a business or undertaking.</p> <p>Health monitoring is different to exposure monitoring. It is not environmental or personal exposure monitoring to hazards in the workplace. The aim is to identify whether exposures are impacting worker health.</p> <p>Health monitoring should never be used as an alternative to using effective control measures.</p> <p>Remember that you must notify the Resources Regulator in the event of adverse health monitoring results.</p>	<p>Health monitoring needs to be supervised by a registered medical practitioner with experience in health monitoring. There are different types of health monitoring techniques used to assess exposure, these include:</p> <ul style="list-style-type: none"> > staff interviews > medical examination > biological effect monitoring > biological exposure monitoring. <p>Safework Australia has a range of guides on health monitoring including guides for PCBUs, workers and doctors.</p> <p>www.safeworkaustralia.gov.au/doc/health-monitoring-exposure-hazardous-chemicals-guide-persons-conducting-business-or-undertaking</p>
<p>(e) The management of health records (including first aid records) of workers at the mine or petroleum site.</p>	<p>Information about a worker’s health must be kept confidential. You need to work out how you can make sure that personal information won’t be viewed by people who shouldn’t see it.</p> <p>Health monitoring reports and results must be kept as confidential records and must not be disclosed to another person except where records are required to be provided under law.</p>	<p>Health monitoring records for all workers must be kept for at least 30 years however for asbestos these records must be kept for 40 years. For more information on selecting health practitioners, health monitoring reports and responding to information in a report please refer to health monitoring for exposure to hazardous chemicals guide.</p>

What steps do you need to take to develop your health control plan?

The development of a HCP is not a complicated process. It can be achieved by adopting a stepped approach, using the following framework. This framework is consistent with the legislative requirements already outlined.

FIGURE 1: HEALTH RISK MANAGEMENT PROCESS



COMMITMENT

The development of a HCP should reflect the PCBU’s work health and safety policy. This policy should outline the commitment to ensuring the health and safety of all involved in the mining or petroleum operations or those affected by the operations.

The roles and responsibilities of persons at all levels of the operation should be documented as part of the HCP. This includes outlining who is responsible for the matters to be addressed by the HCP.

“The roles and responsibilities of persons at all levels of the operation should be documented as part of the HCP...”

CONSULTATION

The HCP must be developed in consultation with workers. Workers should be given reasonable opportunity to express their views, because they are likely to have a clearer, more practical understanding of work tasks and hazard levels. Workers’ views need to be considered in the decision making process. When a decision has been made, the workers must be notified of that decision.

Consultation must occur when there are any major decisions likely to affect workers health in the following capacity:

- > identifying and assessing health risks
- > proposed work changes that affect health
- > decisions relating to the elimination or minimisation of health risks
- > exposure monitoring
- > issue resolution
- > provision of information and training.

RISK MANAGEMENT

The WHS laws establish risk management requirements for all PCBU's. These responsibilities include managing workplace risks related to health hazards.

Briefly, under the WHS laws, PCBU's (including mine and petroleum site operators) must:

- > identify reasonably foreseeable hazards that could give rise to a risk to health
- > eliminate the risk so far as is reasonably practicable
- > eliminate the risk if it is not reasonably practicable or minimise the risk so far as is reasonably practicable by implementing control measures in accordance with the hierarchy of control
- > maintain the implemented control measure so that it remains effective
- > review, and if necessary revise, risk control measures so as to maintain, so far as is reasonably practicable, a work environment that is without risks to health and safety.

A healthy work environment can be achieved by applying a systematic approach to health risk management. Health risk control applies the same general approach as safety risk control (figure 1). However, health risk assessment requires exposure assessment and monitoring against occupational exposure limits. Health management policies, risk



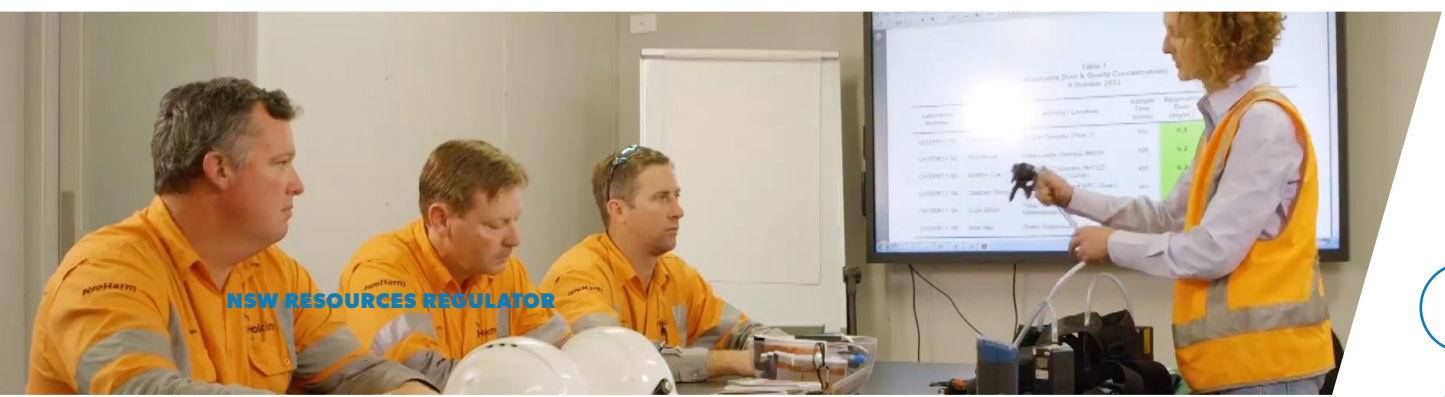
management arrangements and controls must be integrated into a workplace's SMS.

Health risk assessments should involve an initial assessment (identifying what health hazards are present), a targeted assessment of exposure levels and/or an understanding of the health risks associated with the tasks or processes. There is also a requirement for ongoing monitoring and assessment (incorporating learning from incidents, to improve the controls).

Control of risks to health is at the heart of the health control plan. The plan must identify the control measures in place to prevent or minimise exposure to health hazards e.g. minimising dust or noise generation, isolating workers from the hazard, PPE.

For more detailed advice refer to the [ICMM Good practice guidance on health risk assessment](#).

“Control of risks to health is at the heart of the health control plan. The plan must identify the control measures in place to prevent or minimise exposure to health hazards...”



IMPLEMENTATION

Once control measures have been identified, responsibilities need to be allocated to specific people to implement them. Control measures must be monitored and maintained. If the hazard requires exposure monitoring (e.g. dusts, diesel exhaust emissions and noise) then monitoring the effectiveness of the HCP requires the systematic collection and analysis of exposure data.

Personal exposure samples and other information, such as incident or hazard reports, supervisor reports, worker concerns and inspections results should be used to evaluate and review the effectiveness of the plan.

Implementation and monitoring of an effective health control plan requires:

- > ongoing consultation
- > policy commitment to the health control plan
- > roles and responsibilities
- > assessment and monitoring procedures
- > training and supervision
- > ongoing performance monitoring of the health control plan
- > integration of health control plan into the overall safety management system.

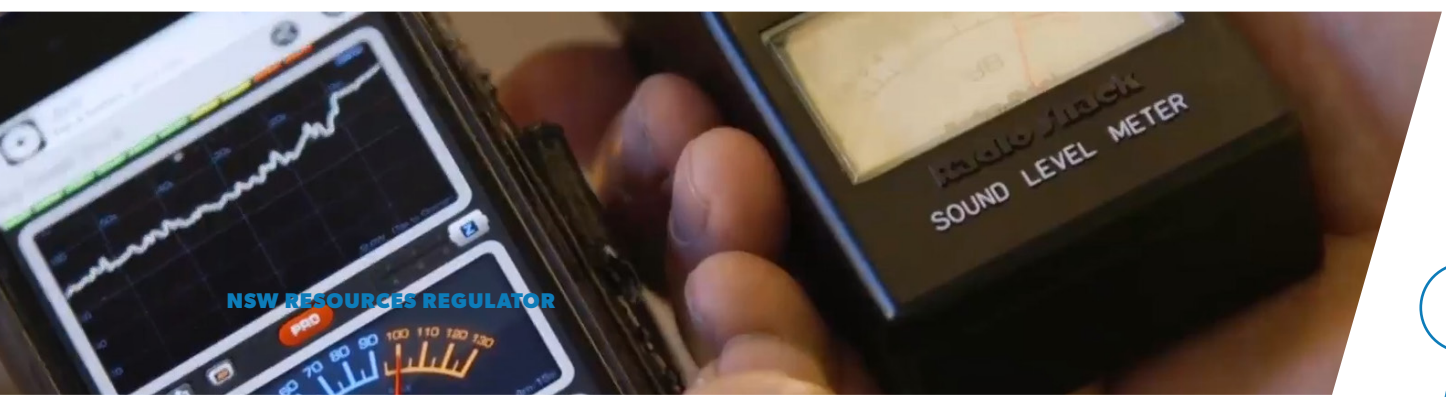


“Once control measures have been identified, responsibilities need to be allocated to specific people to implement them...”

REVIEW AND EVALUATION

Evaluation and review verifies the success of the plan in controlling the risk to health arising from work. As the HCP forms part of the SMS the operator must ensure that performance standards, and a system for auditing the effectiveness of the HCP, are included in the SMS.

Performance standards can include both lag (e.g. exposure events, health assessment results) and lead indicators (e.g. environmental monitoring and health hazard maps, frequency of personal monitoring, information provided to workers).



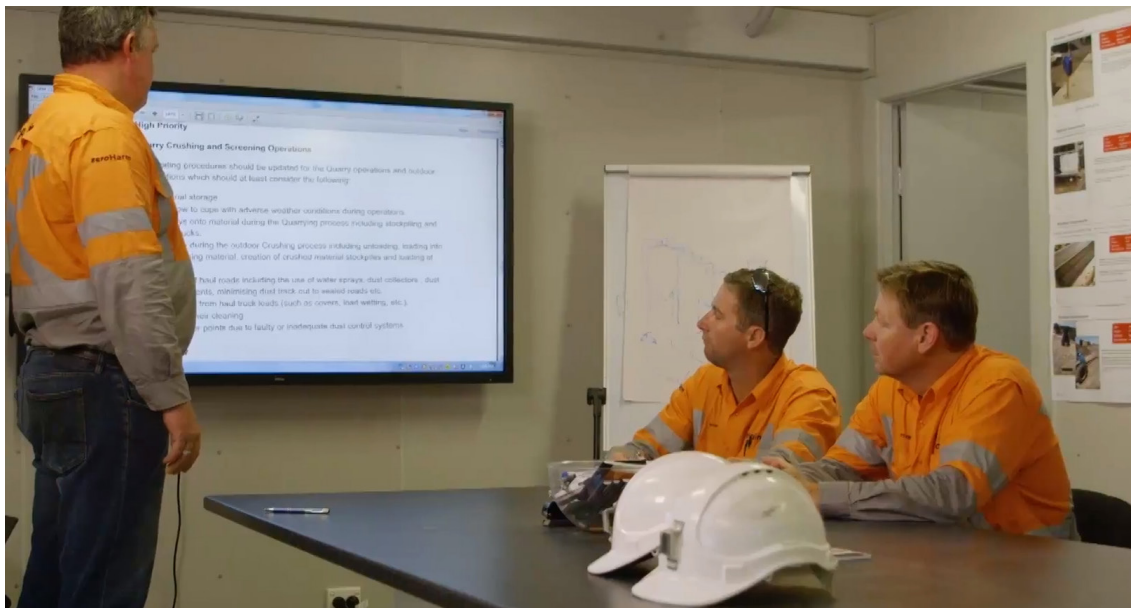
Documenting the health control plan

As a principal control plan, the HCP must be documented and must, in so far as is reasonably practicable, be set out and expressed in a way that is readily understandable by persons who use it⁵.

The legislation is not prescriptive about the way the control plans are documented. The HCP elements can be included in the safety management system documents or be documented as a stand-alone plan. If a separate plan is written, then this should be referenced.

The plan should:

- > list the health hazards at the mine
- > include outcomes of risk assessments for each hazard
- > specify the controls for each health hazard
- > specify arrangements for personal exposure monitoring, including frequency
- > specify other actions to verify the effectiveness and implementation of controls e.g. maintenance records for vehicles and equipment, roadway maintenance and inspection, fit testing for PPE
- > specify arrangements for health monitoring for specified hazards e.g. coal, silica, diesel exhaust emission
- > specify performance measures and auditing methods, including frequency and results.



⁵ As set out in clause 26 (2) of the Work Health and Safety (Mines and Petroleum Sites) Regulation 2014.

Where can I access additional information to assist in developing my health control plan?

For more information on developing a HCP, specific health hazards, risk assessments and controls see the Resources Regulator's [Health control plan](#) information page.

