



Developing and implementing a Health management plan

A guide to the development and implementation of a health management plan in the NSW mining and extractives industry

NSW mining and extractives industry

Use the tools provided to work through the steps outlined in the Health management plan guide. Workers and managers should sign off on the worksheets and retain these as a record of the consultation and risk management actions undertaken to establish the Health management plan. Alternatively, if the site's health and safety management plan already includes these activities use the worksheets to review and update the management plan or educate the workforce.



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Useful resources

NSW mining and extractives industry

Consultation

- AS/NZS 4801 Occupational Health and Safety management systems- Specifications with guidance for use
- AS/NZS 4804 Occupational Health and Safety management systems- General guidelines on principles, systems and supporting techniques
- WorkCover NSW, Effective decision making and how to establish workplace OHS consultation arrangements, NSW WorkCover Code of Practice
- Industry & Investment NSW, *Minerals Industry Safety Handbook*, Part 2, 2002
- Industry & Investment NSW, *Small Mines Safety Kit*, Part 2, 3 ed, 2002

Roles, responsibilities and policy

- AS/NZS 4801 Occupational Health and Safety management systems- Specifications with guidance for use
- AS/NZS 4804 Occupational Health and Safety management systems- General guidelines on principles, systems and supporting techniques
- Industry & Investment NSW, *Minerals Industry Safety Handbook*, Part 2, 2002

Risk management

- AS/NZS 4801 Occupational Health and Safety management systems- Specifications with guidance for use
- AS/NZS 4804 Occupational Health and Safety management systems- General guidelines on principles, systems and supporting techniques
- AS/NZS 4360 Risk Management- Principles and guidelines
- Industry & Investment NSW, *Minerals Industry Safety Handbook*, Part 2, 2002
- Industry & Investment NSW, MDG1010 Risk Management for the Mining Industry
- NOHSC: 10005 (1990). List of designated hazardous substances
- NOHSC: 10005 (1990). Approved criteria for classifying hazardous substances

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Development and implementation of Health Management Plan

- AS/NZS 4801 Occupational Health and Safety management systems- Specifications with guidance for use
- AS/NZS 4804 Occupational Health and Safety management systems- General guidelines on principles, systems and supporting techniques
- AS/NZS 4581 Management system integration- Guidance to business, government and community organisations

Monitor and evaluation

- AS/NZS 1269 Series Occupational Noise Management
- National Code of Practice for Noise Management and Protection of Hearing at Work (NOHSC 2009)
- AS/NZS 2670.1 Evaluation of Human Exposure to Whole-body Vibration
- AS/NZS 2763 Vibration and Shock-Hand Transmitted Vibration- Guidelines for measurement and assessment of human exposure
- ASCC (2007). National Code of Practice for the Prevention of MSD from Performing Manual Tasks at Work
- McPhee, B, Foster, G., & Long, A, (2001) Bad Vibrations: a Handbook on the Whole-body Vibration Exposure in Mining: The Joint Coal Board Health and Safety Trust, Sydney
- WorkCover NSW, *Smart moves*

Websites

- www.dpi.nsw.gov.au
- www.dmp.wa.gov.au
- www.hse.gov.uk
- www.ergonomics.org.au

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Example risk matrix and health issues rating table

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RISK ASSESSMENT NUMBER (RAN)		
RAN 1 – 6	High and unacceptable	Put into place the best PREVENTION controls.
RAN 7 – 10	Medium and unacceptable	A PREVENTION control is necessary (<i>plus</i> a combination of PROTECTION controls).
RAN 11 – 15	Medium and undesirable	Combined PROTECTION controls as minimum. Look to improve.
RAN 16 – 19	Low and acceptable	A PROTECTION control needed as minimum. Review for opportunities to improve.
RAN 20 – 25	Low and desirable	Controls are currently adequate.

		Likelihood					
		A	B	C	D	E	
		Frequent	Probable	Occasional	Remote	Improbable	
Consequences	1	Death	1	2	4	7	11
	2	Severe and permanent	3	5	8	12	16
	3	Mild and permanent	6	9	13	17	20
	4	Temporary	10	14	18	21	23
	5	Minor	15	19	22	24	25

CONSEQUENCE KEY		
1	Death/terminal illness.	Increasing debilitation over time resulting in death (e.g. lung diseases such as asbestosis and mesothelioma and skin disease or melanoma).
2	Severe permanent health effects.	Substantial loss of normal function (e.g. hearing loss, severely restricted or loss of mobility).
3	Mild permanent health effects.	Permanent restriction of normal function such as hearing, mobility and other normal activities.
4	Temporary health effects.	Health effects, both physical and psychological, that is reversible and unlikely to result in permanent illness or disability.
5	Minor health effects.	Short term impacts that are fully reversible.

LIKELIHOOD KEY		
A	Frequent/high intensity (e.g. at or above exposure standard).	Intense exposure is likely to occur frequently in the life of the operation.
B	Probable/moderate to high intensity.	Intense exposure is likely to occur several times in the life of the operation (e.g. typically more than once a month).
C	Occasional/moderate intensity (e.g. 10%-50% of exposure standard).	Moderate intensity exposure is likely to occur in the life of the operation.
D	Remote/low intensity (e.g. well below exposure standard).	Exposure at a level that will result in an adverse health outcome is unlikely but will possible occur in the life of the operation.
E	Improbable/low intensity.	Intense exposure is so unlikely that it can be assumed it may never occur. Exposures are controlled to well below the level for adverse health outcomes.

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Health issues rating table

*Intensity, frequency, latency, severity, priority and key sector for main exposures and conditions*¹

EXPOSURE	CONDITION	INTENSITY ¹	FREQUENCY ²	LATENCY ³	SEVERITY ⁴	PRIORITY ⁵	KEY SECTOR ⁶
Noise	Noise-induced hearing loss	High	Common	Long	Medium	High	All
Vibration	Musculoskeletal conditions	High	Common	Medium	Medium	High	All
Diesel exhaust fumes	Bronchitis/emphysema, lung cancer	Medium	Common	Medium	Medium	High	Underground
Ergonomic stressors	Musculoskeletal conditions (including back pain)	High	Common	Medium	Medium	High	All
Ergonomic stressors (shift work)	Fatigue and related conditions	Medium	Common	Short/Medium	Medium	High	All
Psychosocial hazards	Psychological conditions	Medium	Moderate	Short	Medium	High	All (particularly remote)
Psychosocial hazards	Alcohol and drug-related conditions	Low	Occasional	Medium	Low	Medium	Remote
Ultraviolet radiation	Skin cancer, cataracts	Medium	Common	Long	Medium	High	Above ground
Asbestos-related respiratory disease	Asbestosis, lung cancer, mesothelioma	Low	Common	Long	High	Medium	All
Silica-related respiratory disease	Silicosis, lung cancer, bronchitis/emphysema	Low	Common	Long	High	Medium	All
Coal dust-related respiratory disease	Coal workers' pneumoconiosis, bronchitis/emphysema	Low	Common	Long	High	Medium	Coal
Hazardous substance exposure	Dermatitis	High	Moderate	Short/Medium	Low	High	All
Hazardous substance exposure and asthma	Asthma	Medium	Moderate	Medium	Medium	Medium	All
Hazardous substance exposure and other conditions	Various	Low	Occasional	Various	Medium	Low	All
Welding fumes and respiratory disease	Bronchitis/emphysema, fibroid lung disease, lung cancer	Low	Occasional	Medium	Medium	Medium	All
Thermal stress	Heat-related illness	Low	Uncommon	Short	Medium	Low	Remote western and underground
Synthetic mineral fibres-related respiratory disease	Fibrotic lung disease	Low	Uncommon	Long	Medium	Low	All
Other hazardous substance exposure and other respiratory disease	Bronchitis/emphysema	Low	Occasional	Long	Medium	Low	All
Biological hazards	Various infections	Low	Uncommon	Short	Low	Low	All
Ionising radiation	Malignancies	Very Low	Occasional	Long	High	Low	Minerals sand mining

¹ From: Driscoll T (2007). Summary literature review of health issues related to NSW mining. Report for the Mine Safety Performance Branch, Industry and Investment. ELMATOM Pty Ltd, Sydney.

Intensity¹: The intensity of the exposure.

Frequency²: The frequency of exposure of miners.

Latency³: The period of time between first exposure and development of symptoms.

Severity⁴: The severity of the disease resulting from the exposure.

Priority⁵: The assigned priority of the exposure/issue.

Key sector⁶: The sector(s) for which the exposure/issue is particularly relevant and for which the priority is primarily proposed

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Noise control measures

NSW mining and extractives industry

NOISE HAZARDS	ASSESSMENT AND MONITORING ACTIVITIES	GOOD PRACTICE CONTROL MEASURE IDEAS
<p>Exposure limits:</p> <ul style="list-style-type: none"> • < 85dB _(A) TWA. • < 140dB _(C) Peak <p>Noise references:</p> <ul style="list-style-type: none"> • AS1269.1 • MDG 15 • MDG 29 • NOHSC 1007 • Minerals Industry Safety Handbook <p>Help:</p> <ul style="list-style-type: none"> • Inspectors, Industry Assistance Unit • Institute of Quarrying Australia • Cement Concrete and Aggregates Australia • Coal Services Pty Ltd. • NSW Minerals Council • Acoustic Engineers • Occupational Hygienists 	<ul style="list-style-type: none"> • Observation at site level via a 'walkthrough'. • Consultation with workers about noisy areas. • Conduct a noise hazard risk assessment with workers. • Sound level readings (with a sound level meter). • Referral to manufacturer's specifications on noise output levels (if any). • Referral to the standard or legal exposure limits (see left). • Engage a professional to do a comprehensive noise survey of your areas of concern (see left). • Engage a professional to conduct personal noise dosimetry of those workers identified as at risk (see left). • Periodic health surveillance of employees exposed to hazardous noise levels. 	<ul style="list-style-type: none"> • Put together the elements of a simple noise management plan (start with a policy). • Ensure workers are informed about the hazard. • When buying equipment, request specific noise output levels to OEM's. • Maintain the seals, cabins and engines of vehicles in good working order. • Retro seal or insulate vehicle cabins and work rooms with acoustic dampening material (often inexpensive). • Identify high noise areas on a noise map for all to access. • Set up hearing protection zones, then signpost these areas. • Limit worker exposure through shift rotations around high noise hazards. • Arrange for training in use of hearing protectors. • Ensure contractors are able to and do comply with your noise management plan.

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Diesel particulates control measures

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DIESEL PARTICULATES HAZARDS	ASSESSMENT AND MONITORING ACTIVITIES	GOOD PRACTICE CONTROL MEASURE IDEAS
<p>Exposure limits:</p> <ul style="list-style-type: none"> Respirable dust: 0.2 mg/m³ Elemental carbon: 0.1 mg/m³ <p>Diesel particulates reference:</p> <ul style="list-style-type: none"> MDG 29 Minerals Industry Safety Handbook <p>Help:</p> <ul style="list-style-type: none"> Inspectors, Industry Assistance Unit Institute of Quarrying Australia Cement Concrete and Aggregates Australia Coal Services Pty Ltd. NSW Minerals Council Occupational Hygienists 	<ul style="list-style-type: none"> Monitor diesel particulate emission output at source. Conduct atmospheric monitoring. Conduct a diesel particulate hazard risk assessment with workers. Refer to the Industry and Investments' Mining Design Guide' (see left). Personal exposure monitoring (dosimetry) for those workers most at risk. Periodic health assessments of workers most at risk. 	<ul style="list-style-type: none"> Use of alternative fuels. Use of alternative motor types (electric). Ensure regular maintenance of equipment. Use scrubbers and filters (ensure they are regularly replaced). Set emission limits when tuning engines. Control vehicle traffic into underground environments (tag-board system). Ensure cabins and crib areas are well sealed. Ensure adequate ventilation. Ensure contractor plant and equipment complies with your diesel particulate management procedures.

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Fatigue control measures



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FATIGUE HAZARDS	ASSESSMENT AND MONITORING ACTIVITIES	GOOD PRACTICE CONTROL MEASURE IDEAS
<p>Exposure limits:</p> <p>LIMIT SHOULD BE SET BY RISK!</p> <p>Fatigue reference:</p> <ul style="list-style-type: none"> • Fatigue Management Plan - A practical guide to developing and implementing a fatigue management plan for the NSW mining and extractives industry • Minerals Industry Safety Handbook <p>Help:</p> <ul style="list-style-type: none"> • Inspectors, Industry Assistance Unit • Institute of Quarrying Australia • Cement Concrete and Aggregates Australia • Coal Services Pty Ltd. • NSW Minerals Council • Occupational Physician 	<ul style="list-style-type: none"> • Monitor employees' hours of work. • Query contractors about their off site work schedule, prior to starting at your mine. • Consult with workers regarding roster design. • Conduct a fatigue hazard risk assessment with workers. • Include an examination of fatigue factors in incident investigations. • Refer to the 'Fatigue Management Plan' guide (see left). • Periodic occupational health examinations of employees regularly undertaking night shift work. • Encourage self assessment and reporting of worker fatigue. 	<ul style="list-style-type: none"> • Put together the elements of a simple fatigue management plan. • Ensure workers are informed about the hazard. • Avoid roster changes without proper notice (except in the case of emergencies). • Control overtime especially as a result of call outs. • Limit consecutive night shifts. • Roster design and work scheduling should be flexible enough to allow for regular breaks (or even naps) during night shift rosters. • Ensure control of working environment (lighting, temperature etc.) so as not to contribute to fatigue. • Arrange "fatigue awareness" training for all employees. • Ensure contractors are able to and do comply with your fatigue management plan.

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Hazardous substances control measures



NSW mining and extractives industry

HAZARDOUS SUBSTANCES	ASSESSMENT AND MONITORING ACTIVITIES	GOOD PRACTICE CONTROL IDEAS
<p>Exposure limits:</p> <ul style="list-style-type: none"> • Variable; dependant on MSDS information <p>Hazardous Substances references:</p> <ul style="list-style-type: none"> • NOHSC 1005 • Individual Material Safety Data Sheet's • Minerals Industry Safety Handbook <p>Help:</p> <ul style="list-style-type: none"> • Inspectors, Industry Assistance Unit • Institute of Quarrying Australia • Cement Concrete and Aggregates Australia • Coal Services Pty Ltd. • CHEMWATCH • Occupational Hygienists • NSW Minerals Council 	<ul style="list-style-type: none"> • Conduct atmospheric monitoring. • Conduct a hazardous substance risk assessment with workers. • Refer to SafeWork Australia's Standard (see left). • Refer to relevant material safety data sheet (MSDS). • Periodic health assessments of workers most at risk (those who work regularly with hazardous substances). • Query employees for chemical sensitivities or allergies. 	<ul style="list-style-type: none"> • Have an emergency response plan. • Use of less hazardous varieties of the substance. • Maintain well signposted areas around hazardous substances. • Keep a hazardous substances log and dangerous goods register. • Alert authorities (e.g. fire department) of location and nature of substances stored at your mine. • Ensure proper training in the storage and handling of hazardous substances. • Ensure adequate wash out facilities. • Ensure proper storage facilities exist for hazardous substances. • Ensure cabins and crib areas are well sealed. • Ensure adequate ventilation of work area. • Ensure contractors are competent using the hazardous substance they are required to handle at your mine.

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Whole body vibration control measures

NSW mining and extractives industry

WHOLE BODY VIBRATION (WBV) HAZARDS	ASSESSMENT AND MONITORING ACTIVITIES	GOOD PRACTICE CONTROL MEASURE IDEAS
<p>Exposure limits:</p> <ul style="list-style-type: none"> • Caution zone for steady state = approx 0.5m/s² to 0.85m/s² • Caution zone for VDV = approx 8.5m/s^{1.75} to 17m/s^{1.75} • For exposures in the Caution Zone there is a potential health risk (AS2670) <p>Whole Body Vibration (WBV) references:</p> <ul style="list-style-type: none"> • Managing Musculoskeletal Disorders – A practical guide to preventing musculoskeletal disorders in the NSW mining and extractives industry • Bad Vibrations • AS2670 • Minerals Industry Safety Handbook <p>Help:</p> <ul style="list-style-type: none"> • Inspectors, Industry Assistance Unit • Institute of Quarrying Australia • Cement Concrete and Aggregates Australia • Coal Services Pty Ltd. • NSW Minerals Council 	<ul style="list-style-type: none"> • Encourage self assessment and reporting of worker’s signs and symptoms. • You may be able to get suitable vibration data from the equipment/vehicle handbook, or from the OEM. • If you want to obtain vibration measurements for your own tools you will need to arrange for a competent person to carry out measurements for you using specialised equipment. 	<ul style="list-style-type: none"> • Road Maintenance: <ul style="list-style-type: none"> ○ Planned, systematic road maintenance programs. ○ Effective communication of road conditions. (e.g. signposting, markers). ○ Prompt repair of poor road conditions. • Vehicle and seat design: <ul style="list-style-type: none"> ○ Vehicle seat (with adjustability) and suspension appropriate for loads. ○ Improved visibility from cab (especially at night (e.g. headlights). ○ Forward facing passenger seating. • Operator training and awareness: <ul style="list-style-type: none"> ○ Raise awareness of harmful effects of vibration and driver competency training. • Speed: <ul style="list-style-type: none"> ○ Enforce speed limits appropriate to conditions. ○ Speed limit vehicles in specific situations. • Vehicle maintenance: <ul style="list-style-type: none"> ○ Planned maintenance of vehicle and seat suspensions.

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UV radiation control measures



NSW mining and extractives industry

UV RADIATION HAZARDS	ASSESSMENT AND MONITORING ACTIVITIES	GOOD PRACTICE CONTROL MEASURE IDEAS
<p>Exposure limits: LIMIT SHOULD BE SET BY RISK!</p> <p>UV radiation reference:</p> <ul style="list-style-type: none"> • NOHSC 3012 • Minerals Industry Safety Handbook <p>Help:</p> <ul style="list-style-type: none"> • Inspectors, Industry Assistance Unit • Institute of Quarrying Australia • Cement Concrete and Aggregates Australia • Coal Services Pty Ltd. • NSW Minerals Council. • Occupational Hygienists. • Cancer Council. 	<ul style="list-style-type: none"> • Monitor employees' outdoor working hours. • Use the UV Index as a guide to work scheduling. • Consult with workers regarding outdoor work scheduling. • Conduct a UV hazard risk assessment with workers. • Refer to the 'Guidance note for the protection of workers from the ultraviolet radiation in sunlight' (see left). • A periodic occupational health examination of employees that regularly work outdoors. • Encourage workers to self assess and report any changes in skin (not just exposed areas!). 	<ul style="list-style-type: none"> • Plan for the management of UV hazards on your site. Include processes that may produce UV radiation (e.g. welding). • Tint windows of vehicles and offices. • Provide temporary structures for necessary outdoor work. • Position temporary office structures so as to avoid sunlight during the hottest parts of the day (e.g. 10am-3pm). • Schedule activities outside of the hottest parts of the day (e.g. 10am-3pm). • Arrange "UV awareness" training for all employees. • Ensure contractors are able to manage UV hazards on your site. • Ensure the use of close weave, dark coloured clothing covering vulnerable areas (e.g. arms, neck). • Ensure the use of wide brimmed hats, UV rated sunglasses and SPF 30+ sunscreen.

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Hand arm vibration control measures



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HAND ARM VIBRATION (HAV) HAZARDS	ASSESSMENT AND MONITORING ACTIVITIES	GOOD PRACTICE CONTROL MEASURE IDEAS
<p>Exposure limits:</p> <ul style="list-style-type: none"> Guidance only for different exposure levels <p>Hand Arm Vibration (HAV) references:</p> <ul style="list-style-type: none"> Managing Musculoskeletal Disorders – A practical guide to preventing musculoskeletal disorders in the NSW mining and extractives industry MDG 29 AS2763 Minerals Industry Safety Handbook <p>Help:</p> <ul style="list-style-type: none"> Inspectors, Industry Assistance Unit Institute of Quarrying Australia Cement Concrete and Aggregates Australia Coal Services Pty Ltd. NSW Minerals Council Occupational Hygienists Ergonomist 	<ul style="list-style-type: none"> Encourage self assessment and reporting of workers signs and symptoms. You may be able to get suitable vibration data from the equipment handbook, or from the equipment supplier. If you want to obtain vibration measurements for your own tools you will need to arrange for a competent person to carry out measurements for you, using specialised equipment. 	<ul style="list-style-type: none"> Limit the time workers are exposed to vibration. Ensure right tool for the job is in good repair and make sure cutting tools are sharp so that they remain efficient. Purchasing policy for replacing old equipment and tools. Workstation design – to minimise force caused by poor posture; use devices such as jigs and suspension systems to reduce the need to grip heavy tools tightly. Maintenance programs for equipment to prevent avoidable increases in vibration (following the manufacturer’s recommendations where appropriate). Dampeners/vibration reducing handles – the use of rubber bushes, sleeves and anti-vibration mounts may be appropriate. Use of gloves – to keep hands warm, but should not be relied upon to provide protection from vibration. Alternative work methods – to minimise exposure and poor posture.

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Understanding health management and good practice

TOOL

1

NSW mining and extractives industry

Introduction to health risk management

Health risk management utilises the same basic principles as safety management but the nature of health hazards are somewhat different to safety hazards. Some health hazards like noise, dust, diesel particulates and manual handling are often accepted as unavoidable nature and conditions of mining work.

The different nature of health hazards

Assessing the consequences or health impacts from exposure to health hazards requires an understanding of the effects on the body of long term exposure. **Health consequences** may not be immediately evident and in fact may not be evident for many years. Health consequences are often the result of an accumulation of 'micro' injuries or changes that eventually present as a **chronic** illness or degenerative condition much later in life. **The likelihood or probability** of the chronic illness or degenerative condition occurring is linked to the **intensity or concentration** of the hazard exposure and the **duration and frequency** of the exposure.

Assessment of risk and the recommended level of control are often linked to action levels. Action levels are defined according to the combined intensity or concentration of the hazard and the duration and frequency of the exposure. In addition, the more serious the potential health consequences the more important it is to reduce the intensity, duration and frequency of exposure.

Finally, the mechanisms for onset of the chronic illness or degenerative condition are different for each category of health issue and therefore no one assessment approach suits all health hazards.

What characterises good practice in health management?

Good practice in health and safety management is achieved through effective risk management activities coupled with a positive health and safety culture. Health risk management tools need to be sensitive to the assessment requirements outlined above.

Characteristics of a good health management plan:

- A champion or team to address and manage health issues.
- Prevention or control of hazards at their source.
- Regular exposure monitoring to check that controls are working.
- Early reporting of health issues if exposure occurs.
- Surveillance program in place for legislated hazards.

Prepare

Continued overleaf

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The challenge is to communicate the health management plan to workers so that risk management activities are understood and implemented.

As for safety, good practice health management is characterised by:

- Commitment and participation.
- Consultation and engagement.
- Leadership, supervision and behaviour.

Commitment and participation

Commitment begins with the employer and is demonstrated by actions such as:

- Including Health in the health and safety policy, consulting with workers, and effectively communicating commitment to health management.
- Defining the roles and responsibilities for health at all levels of the organisation.
- Being involved in the OHS committee or consultation arrangements to ensure health issues are addressed.
- Reporting back to employees on health issues such as results of exposure monitoring or the implementation of corrective actions.
- Integrating health into existing OHS activities, processes and systems.
- Planning new equipment/substance purchases to reduce exposure to health hazards.

Consultation and engagement

Workers know when they are in pain and discomfort and usually have a good understanding of the causes. Ensure workers take an active role in the health management process by:

- Using workers experience and knowledge to identify and assess health hazards and to suggest effective solutions to manage and control them.
- Providing instruction, training and support for the use of controls that have been implemented to minimise health exposures.
- Ensuring workers are involved in planning and implementing changes to their work.
- Providing feedback to workers regarding their reported concerns.

Leadership, supervision and behaviour

Encourage workers to report and look for ways to reduce health hazards. Learn from mistakes, encourage and recognise those who bring forward ideas for improvement by:

- Communicating and training workers, contractors and visitors in a process to report health hazards/issues that could lead to illness/injury.
- Managers and supervisors encouraging everybody to report signs and symptoms of health conditions as soon as possible.
- Receiving these reports positively and by taking appropriate actions to fix problems at the source.



Understanding health management and good practice

NSW mining and extractives industry

Instructions

1

Prepare

PURPOSE AND OBJECTIVES:

Health risk management uses the same general approach to risk management as safety. Exposures to health hazards such as excessive noise, fumes, dust or manual handling may sometimes occur as a single incident but more often there is an ongoing level of exposure that can cause a disease or loss of function.

The purpose of this communication tool is to assist mine personnel understand the nature of health hazards, the risks and how to effectively assess and control hazards at their source.

The objectives are to:

- Understand the different nature of health hazards.
- Recognise the characteristics of good practice in health management.

PROCESS:

- Gather exposure monitoring, health surveillance and workers compensation claims information.
- Identify appropriate meetings to discuss health management and raise an agenda item.
Examples of the appropriate meetings are:
 - Tool box talks.
 - Management meetings.
 - OHS committee meetings.
- Establish a team or identify a champion to lead the health management review.



Health management at a glance self-assessment worksheet

NSW mining and extractives industry

Mine name: _____ Section: _____ Date: _____

Assessment Team Leader: _____ Participants (names/positions): _____

QUESTIONNAIRE	RESPONSE						Averaged Score	TOOLS AVAILABLE	RESULTS
	Not started	Just started	Progressing	Done	0	1			
CONSULTATION, COMMITMENT AND RESPONSIBILITIES: Everybody is given sufficient opportunity, time and resources to participate in health management and are clear about their health responsibilities.									
The consultation process is used to report health risks and review and discuss exposure monitoring and other assessment results.	<input type="checkbox"/>	□	Tool 1: Prepare & understand Tool 2: Consult and undertake self-assessment Tool 3: Health policy and commitment. Tool 4: Health responsibilities.	<ul style="list-style-type: none"> Meaningful consultation demonstrated and workers understand how to include health risk management in daily work procedures. Health and safety policy discussed. Health responsibilities are allocated (if you have just started, allocate responsibilities after completing the risk management step). 					
Workers are provided with necessary information about health hazards and controls to enable meaningful participation in health risk management.	<input type="checkbox"/>								
Workers are consulted when work procedures are changed or new equipment/substances are to be purchased, and consideration is given to noise, diesel fumes, dust reduction and ergonomics.	<input type="checkbox"/>								
The health and safety policy includes a commitment to managing hazards with health impacts and identifies health responsibilities.	<input type="checkbox"/>								
Commitment to health management is demonstrated by allocating time, money and training resources.	<input type="checkbox"/>								
HEALTH RISK MANAGEMENT: Everybody works together to identify the health hazards and fix problems at the source before health exposures occur.									
Information including operating manuals, material safety data sheets (MSDS's), standards, guides and general information is made available during risk assessments.	<input type="checkbox"/>	□	Tool 5: Identifying health hazards and their sources. Tool 6: Assessing risks associated with hazards. Tool 7: Risk control worksheet.	<ul style="list-style-type: none"> Health hazards identified. Hazard register developed. Risk assessments for identified hazards completed and recorded. Hierarchy of controls considered. Control measures for hazards identified. 					
Inspections look for health hazards (e.g. noisy equipment, awkward postures, chemical handling, dust and fatigue).	<input type="checkbox"/>								
Hazards with health impacts are identified and assessed during toolbox talks and job safety analyses and then included in safe work method statements.	<input type="checkbox"/>								
Risks with health impacts are controlled at the source to prevent or reduce exposure.	<input type="checkbox"/>								
Exposure monitoring is carried out when required as part of the risk assessment and to evaluate effectiveness of controls.	<input type="checkbox"/>								
IMPLEMENTING HEALTH MANAGEMENT – SUPERVISION, TRAINING FOR COMPETENCE AND RECORD KEEPING: Everybody is competent to manage health risks within their area of responsibility and supervisors are trusted and decisions are supported.									
Supervisors talk to workers about health risks, encourage reporting of hazards and ensure hazard reports are acted on and closed out in a timely manner.	<input type="checkbox"/>	□	Tool 8: Health Risk Action and Review Plan. Tool 9: Health Hazard Register.	<ul style="list-style-type: none"> Work procedures and training needs identified. Plan includes support for supervisors. Plan in place to manage and review health risks. 					
Everybody is informed of the health hazards in their workplace and trained in safe work procedures including the fitting of PPE.	<input type="checkbox"/>								
The maintenance program for plant and roadways etc. takes into consideration the need to manage noise, diesel fumes, dusts and ergonomics etc.	<input type="checkbox"/>								
Health management records are maintained and filed appropriately.	<input type="checkbox"/>								
Supervisors are supported by managers in the performance of their role in implementing and enforcing procedures.	<input type="checkbox"/>								
IMPLEMENTING HEALTH MANAGEMENT - EVALUATION AND REVIEW: The health management plan includes ongoing monitoring and evaluation for effectiveness.									
Risk assessments and exposure monitoring is carried out regularly and appropriate control measures are in place to eliminate, isolate or reduce exposures for:							□	Tool 10: Health Management Plan evaluation.	<ul style="list-style-type: none"> Health Management Plan is evaluated in consultation with and reviewed by managers.
o Noise.	<input type="checkbox"/>								
o Diesel exhaust fumes and other respirable dusts.	<input type="checkbox"/>								
o Ergonomic stressors causing musculoskeletal conditions.	<input type="checkbox"/>								
o Fatigue.	<input type="checkbox"/>								
The Health Management Plan is monitored and evaluated for continuous improvement.	<input type="checkbox"/>								

Consult

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Health management culture maturity scale

The self-assessment rating tool applies the **Minerals Industry Risk Management Maturity Chart** as a standard for mines to measure and assess their performance. The self-assessment rating tool and maturity chart together provide a simple plan for implementing and monitoring the improvement process.

The advice provided in this tool kit is based on the idea that a mature risk management system is dependent on a mature occupational health and safety culture. A mature culture is built by consulting broadly, committing resources, communicating responsibilities, promoting participation and following through with actions.

A pro-active and resilient culture supports a pro-active approach to risk management and the development of a system which anticipates risks before they occur and seeks to eliminate or control exposures at their source.



Health management at a glance self-assessment worksheet

NSW mining and extractives industry

Instructions

2

PURPOSE AND OBJECTIVES:

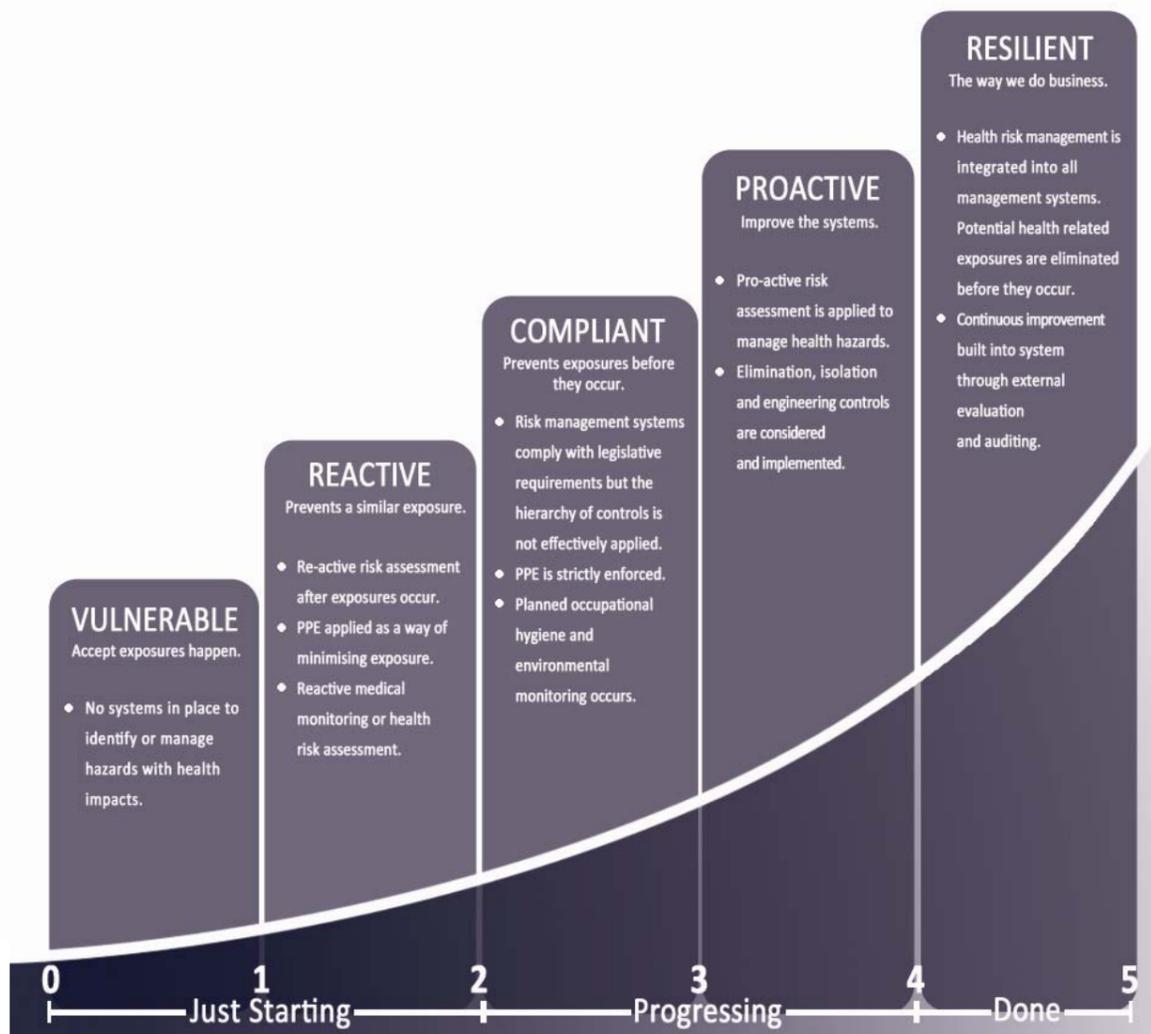
The purpose of the self-assessment tool is to promote consultation with managers, supervisors and workers about health issues and how well they are managed at the mine.

The objectives are to:

- Rate the current health risk management system.
- Identify system strengths, weaknesses and opportunities for improvement.
- Assist in health management planning.

PROCESS:

- Select a representative group of managers, supervisors, workers and contractors to participate in the self-assessment.
- Agree on a consensus rating for each question. If 'not started' is ticked assign 0 points, if 'just starting' is ticked assign 1 point, if 'progressing' is ticked assign 3 points and if 'done' is ticked assign 5 points.
- Assign an average rating out of 5 for each element by totalling the points for each element and dividing by the number of questions.
- Compare your results for each element against the Health Management Culture Maturity Ladder.
 - Vulnerable to reactive** (just started) - the mine health and safety management system isn't managing health risks.
 - Compliant to proactive** (progressing) - the system manages health risks but health management is not well understood.
 - Resilient** (done) - the system is working well and continuous improvement is built in to the health management system.
- Discuss what is being done well and decide where opportunities exist to improve the health management system at the mine.
- Communicate the outcomes to the management team with recommendations for actions that need to be undertaken to improve or develop the health management plan.



Health management culture maturity scale

Consult



Health policy and commitment communication tool

TOOL

3

Commit

NSW mining and extractives industry

Introduction

Policies are everywhere. Health and safety policy, internet use policy, bullying policy... and the list goes on!

'What role does a health and safety policy play and why do we need to have one?'

Ask these questions and you will get a range of responses, indicating that policy means different things to different people... and to some, it means nothing at all.

What is a Policy?

Simply put, a policy is a statement of a mine's values and goals regarding the way it conducts its' business. It becomes a strategic link between company vision and day-to-day activity.

Are there benefits to having a policy?

A health and safety policy identifies the 'key' health and safety activities and sets out the mine's expectations to decision makers on how to handle health and safety issues as they arise.

A well written policy allows all employees to understand their roles and responsibilities within their area of authority.

What health issues are we talking about?

Noise induced hearing loss, lung disease, dermatitis, musculoskeletal disorders and some psychological and fatigue related conditions are examples of health issues that result from hazards that may be present in the work environment.

Development of health and safety policy

It is essential to the success of a policy, that all those that it covers, have had a say in its development. This helps build ownership and commitment.

In preparing to review or develop and implement a health management plan a good place to start is with the health and safety policy.

Does the existing policy capture the expectations of all at the mine in relation to maintaining a healthy work environment?

Continue overleaf

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Does a health and safety policy have any power or is it just words on a page?

A health and safety policy should capture the mine's values and goals towards health and safety.

If it has been developed through genuine consultation, then it is also a representation of the mine's commitment.

This is particularly powerful if it is understood and promoted in this manner, more so, if individual responsibilities are outlined (in a general way) for all those that are covered by the policy. In this way everyone can be held accountable to the spirit of the policy.

A policy commitment is the first step in the creation of a cultural shift in OHS. The policy statement needs to be followed through by actions that demonstrate that the commitment is real.

Characteristics of a good OHS policy

Characteristics of a good health and safety policy include the following:

- States the organisations objective or goal for both health and safety.
- Has a statement identifying its development through consultation (recognises ongoing consultation).
- Makes reference to the current legislation.
- Sets out in general terms roles and responsibilities for all those it covers.
- Need only be up to a page in length.
- Is reviewed periodically.
- Is signed by senior management (e.g. CEO).
- Is available to all interested parties.
- Is displayed in prominent locations throughout the organisation.
- Forms part of the induction process for the organisation.

Commit



Health policy and commitment communication tool

NSW mining and extractives industry

Instructions

3

Commit

PURPOSE AND OBJECTIVES:

The purpose of the policy and commitment communication tool is to gain management and worker commitment to health management.

The objectives are to:

- Review the current health and safety policy and decide whether commitment to controlling health risks is adequately expressed.
- Promote a greater understanding of the role policy plays in gaining commitment at all levels.
- Identify actions that need to be taken at all levels to demonstrate the commitment expressed in the policy.

PROCESS:

- Obtain and review a copy of the company or mine's health and safety policy and determine if health management and health responsibilities are adequately covered by the policy.
- Gain management approval to discuss the health and safety policy and commitment to health with workers and contractors.
- Arrange a meeting, tool box talk or raise an agenda item at an OHS committee meeting to discuss the health and safety policy and the mine's commitment to maintaining a healthy work environment.
- Use the information sheet provided to stimulate discussion about the mine's commitment to managing worker exposure to health risks arising from hazards in the work environment.
- If appropriate seek ideas about how commitment to health could be expressed in the policy.
- Gather ideas about what else could be done by workers, supervisors and management to demonstrate a commitment to health management.

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Health responsibilities worksheet

Instructions

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PURPOSE AND OBJECTIVES:

The purpose of this tool is to assign health management responsibilities to the various operational roles in an organisation in consultation with managers, supervisors and workers.

The objectives are to:

- Agree on a set of responsibilities for health management.
- Assign these responsibilities to the various roles in the organisation in consultation with a representative group.

PROCESS:

- Review the list of health and safety activities in the tool sheet attached. The list is not exclusive, add or delete activities to reflect the health and safety activities that are regularly carried out at the mine.
- Write the position title that will be assigned the responsibility and nominate the person who will be responsible for actioning each health management activity.
- Think about whom else needs to be involved in the health management activity. Some people may have multiple responsibilities while others may only be involved in the process.

Give consideration to:

- The nature of the responsibility (what is involved with carrying it out? Is it clear?).
- The authority it will require to action (does the position have the authority to carry it through to completion?).
- The level of understanding/competency needed to action responsibilities (do those who have been assigned health responsibilities possess the knowledge or capability to carry out their assignment effectively?).
- What resources (e.g. time, training, consultants, equipment etc.) will be required?

Examples of roles in organisations:

- Operations Manager / Production Manager.
- Supervisor.
- Operator/driver.
- OHS co-ordinator.
- Engineer.
- Maintenance/trades person.
- Worker.
- OHS representative, OHS committee chair person or check inspector.

Accountability



Health responsibilities worksheet

NSW mining and extractives industry

TOOL

4

Accountability

Mine name:		Section:		Date:	
Lead by:		Participants:			
HEALTH AND SAFETY ACTIVITIES	RESPONSIBLE POSITION	WHO ELSE WILL PARTICIPATE			
Review and analyse incident reports, claims etc.					
Conduct hazard identification inspections.					
Follow up health hazard reports to ensure close out.					
Maintain the 'Health Hazard Register'.					
Conduct health risk assessments.					
Implement identified controls for health risks.					

Continued overleaf

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Continued from overleaf

HEALTH AND SAFETY ACTIVITIES	RESPONSIBLE POSITION	WHO ELSE WILL PARTICIPATE
Review safe work procedures to include health risks.		
Ensure health risk controls and safe work procedures are followed.		
Review risk management procedures to ensure health hazards and risks are included in risk analyses.		
Organise training on health hazards, risks and controls.		
Maintain induction training content.		
Organise and review exposure monitoring.		
Organise and review health surveillance.		
Carry out maintenance to reduce health related exposures (diesel fumes, noise etc).		
Provide necessary resources.		

Management sign-off:

Date:

Accountability

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Health hazards and their sources identification worksheet

Instructions

5

NSW mining and extractives industry

PURPOSE AND OBJECTIVES:

The purpose of the health hazard identification tool sheet is to prompt the mine personnel to think broadly about the sources of health hazards.

The objectives are to:

- Identify work processes and tasks that are potential sources of health hazards.
- Estimate corresponding intensity or concentration, duration and frequency through observation or exposure sampling.
- Identify workers/occupational groups most exposed.

PROCESS:

- Review your hazard incident/workers compensation claims reports for obvious trends.
- Gather information on hazardous substances from material safety data sheets and equipment from equipment manuals.
- Review exposure monitoring/sampling results, manual handling risk assessment reports and hazard reports.
- Talk to workers about health issues in their work tasks or environment.
- Gather a representative group from your workplace to conduct a 'health' hazard identification walk. Incorporate with your 'safety' hazard walks, to eliminate unnecessary repetition.
- Create a 'mud-map' of your site and mark identified sources of health hazards.
- All members should have a copy of this tool and fill it in as they conduct the walk.
- Discuss exposure estimates with team members and then record.
- After the walk, sheets should be collected and retained for your records.
- Management should be involved and aware of the outcome of the inspection.
- At the end of the identification walk you should have a good idea of what hazards require further assessment.
- Go to **Tool 6 – Assessing risks associated with health hazards worksheet** and use the risk assessment worksheet to rate the risk (with the current controls in place) associated with each hazard.

Identify



Health hazards and their sources identification worksheet

NSW mining and extractives industry

Mine name:	Section:	Date:
Survey Team Leader:	Participants:	
HAZARD – WORKPLACE ENVIRONMENT	RECORD HAZARD SOURCE/EXPOSED WORKERS	ESTIMATE OF EXPOSURE INTENSITY AND DURATION
Identify noisy equipment or processes? (Consider doing noise samples and look for OEM noise assessment report on plant)		
Identify cutting or welding activities which emit radiation?		
Identify work areas where extremes of heat, cold or humidity are present?		
Identify work areas and workers exposed to sun?		

Continued overleaf

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HAZARD – WORKPLACE ENVIRONMENT	RECORD HAZARD SOURCE/EXPOSED WORKERS	ESTIMATE OF EXPOSURE INTENSITY AND DURATION
Are there areas at the mine where dust is visibly noticeable?		
Is the smell of diesel strong in any location? (List diesel equipment, ask workers and consider sampling)		
Does tunnelling work occur with exposure to changes in atmospheric pressure?		
Is ventilation adequate and are harmful gases extracted? (Ask workers and consider sampling)		

HAZARD –CHEMICAL/HAZARDOUS SUBSTANCES	RECORD CHEMICAL/EXPOSED WORKERS	REFER TO MSDS FOR HEALTH EFFECTS
What chemicals/hazardous substances are being used and what does the material safety data sheet say about possible side effects?		
What products, by-products and wastes are being produced and how could they cause harm? (e.g. heavy metals/ionising radiation, asbestos)		

Identify

Continued overleaf

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HAZARD – BIOLOGICAL	RECORD HAZARD/EXPOSED WORKERS
What systems are in place for drinking water, hand washing effluent, sanitation and sewage? (Consider tinea exposure in shower rooms.)	
Are eating places controlled for rodents and micro-organisms?	
Is there air-conditioning? If so, have you controls in place that meet the NSW Health Code of Practice for the Control of Legionnaires' Disease?	
Could fungi be present in the mine environment?	

HAZARD – ERGONOMICS (WORKPLACE DESIGN AND WORK TASK DEMANDS)	RECORD HAZARD SOURCE/EXPOSED WORKERS	ESTIMATE OF EXPOSURE INTENSITY AND DURATION
What heavy manual tasks have to be carried out? (Ask workers whether any tasks require excessive force)		
What tasks require repetitive, awkward or unnatural movements or require workers to remain in fixed positions for long periods?		
Does plant/vehicle operator control layout, seating etc. result in awkward or unnatural posture or movement? (Ask operators and identify plant)		

Identify

Continued overleaf

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HAZARD – ERGONOMICS (WORKPLACE DESIGN AND WORK TASK DEMANDS)	RECORD HAZARD SOURCE/EXPOSED WORKERS	ESTIMATE OF EXPOSURE INTENSITY AND DURATION
What tasks involve exposure to hand and/or whole body vibration? (Ask workers about effects, consider if a vibration assessment is needed)		
Does PPE restrict free movement or require greater exertion?		
Are there tasks that require mental alertness or mental agility?		
Could fatigue, distraction and use of medication create a hazard?		

ADDITIONAL NOTES

Identify

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Completion of the Survey

After completing the hazard identification survey list the plant, equipment, tasks or workplace issues that require further assessment.

ISSUES CONCERNING WORKPLACE ENVIRONMENT

--

ISSUES CONCERNING CHEMICAL / HAZARDOUS SUBSTANCES

--

ISSUES CONCERNING BIOLOGICAL RISKS

--

ISSUES CONCERNING ERGONOMICS (WORKPLACE DESIGN AND WORK TASK DEMANDS)

--

ISSUES CONCERNING PSYCHOLOGICAL RISKS (INCLUDING FATIGUE)

--

Management sign-off:

Date:

Identify

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Assessing risks associated with health hazards worksheet

Instructions

6

Assess

NSW mining and extractives industry

PURPOSE AND OBJECTIVES:

The purpose of the risk assessment tool sheet is to prompt the assessment team to think about the different nature of health hazards and risk when rating likelihood and consequences.

The objectives are to:

- Rate the consequence, taking into consideration the possible severity of the disease resulting from the exposure and the time between exposure and the onset of symptoms.
- Rate the likelihood, taking into consideration the potential intensity or concentrations and frequency and duration of exposures.
- Identify workers/occupations most likely to be exposed.

PROCESS:

- Look at relevant regulations and standards for information on occupational exposure standards and exposure monitoring and control measures.
- Review results or arrange for exposure monitoring to be conducted if this information is needed (**refer to Resource sheets**).
- Consider whether a specific assessment is needed for hazards such as manual tasks or fatigue.
- Gather information such as material safety data sheets for chemicals; operator manuals for plant and equipment; and other useful information from trusted sources.
- In discussions, agree on the number of persons exposed and the average length of that exposure in that area or task (include hours exposed a day/shift and also the number of shifts in a working week/roster). The aim is to help understand the magnitude of the exposure to this hazard source.
- Use a risk matrix that you are familiar with in conjunction with the likelihood and consequence keys provided (**refer to Resource sheets**).
- On the Health Risk Assessment worksheet, for each work task or work location, record the hazards associated with the task and its source/s.
- Discuss current controls for each hazard, assess the risk (with current control in place) and assign a risk rating. If current controls do not match the recommended level of control (**see table in Resource B**) discuss what more can be done.
- Use **Tool 7 – Risk control worksheet** for each hazard identified to ensure the hierarchy of controls are applied.
- Re-assess the hazard with agreed additional controls.
- Use **Tool 8 – Health action and review plan record sheet** and **Tool 9 – Health hazard register** to record the task and hazard.
- Identify person(s) responsible and timeframes for control implementation and their re-evaluation.
- Ensure the risk assessment is signed off by management through their involvement.

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Assessing risks associated with health hazards worksheet

TOOL

6

Assess

NSW mining and extractives industry

Mine name:		Section:		Date:	
Assessment Team Leader:		Description of task or process:			
Participants: (Name/Position)		Number of operators/workers:			
		Task duration:			
		Frequency of task:			

Relevant legislation, industry standards or guideline:

FOR THE JOB/WORK PROCESS RECORD EACH HAZARD AND THE SOURCE (TASK, PLANT OR EQUIPMENT)	NOTE EXPOSURE STANDARD	RESULTS OF EXPOSURE MONITORING OR OTHER ASSESSMENT	SEVERITY HEALTH CONSEQUENCE	FREQUENCY AND INTENSITY LIKELIHOOD	CURRENT RISK CONTROL (WHERE DOES THIS SIT IN THE HIERARCHY OF CONTROLS)	RISK RATING	IF CONTROL DOESN'T MATCH RECOMMENDED LEVEL, WHAT MORE CAN BE DONE?	NEW RISK RATING

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FOR THE JOB/WORK PROCESS RECORD EACH HAZARD AND THE SOURCE (TASK, PLANT OR EQUIPMENT)	NOTE EXPOSURE STANDARD	RESULTS OF EXPOSURE MONITORING OR OTHER ASSESSMENT	SEVERITY HEALTH CONSEQUENCE	FREQUENCY AND INTENSITY LIKELIHOOD	CURRENT RISK CONTROL (WHERE DOES THIS SIT IN THE HIERARCHY OF CONTROLS)	RISK RATING	IF CONTROL DOESN'T MATCH RECOMMENDED LEVEL, WHAT MORE CAN BE DONE?	NEW RISK RATING	
Further action planned:									
Person(s) responsible and completion date:									
Management sign-off:							Date:		

Assess

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Risk control worksheet

Instructions

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NSW mining and extractives industry

PURPOSE AND OBJECTIVES:

The purpose of the risk control worksheet is to ensure the hierarchy of controls is applied when selecting control measures.

The objectives are to:

- Demonstrate that the chosen control for each hazard is the highest achievable level of control.
- Have health hazards controlled at the source rather than relying on lower order controls such as work procedures and PPE.

PROCESS:

- Use the risk control worksheet together with the assessment worksheet.
- For hazards where the current control doesn't match the recommended level of control, work through the hierarchy of controls and agree on an alternative higher order control or additional control.
- For each task/process, work through the hierarchy of controls for each hazard.
- Involve management (if they are not already involved) and ensure the risk control is approved.
- Record risk control information on the Tool 8 – 'Health action and review plan record sheet' and set the implementation and re-assessment date.
- Reassess the risk once the new or additional control is in place. The assessment should include exposure monitoring where applicable.
- Record relevant information in Tool 8 – 'Health action and review plan record sheet' and Tool 9 – 'Health hazard register'.

Control



Risk control worksheet

NSW mining and extractives industry

Mine name:		Section:		Date:	
Team Leader: (name/position)		Participants: (names/positions)			
Hazard and work task/ process:					
CONTROL MEASURE	EXPLAIN THE DECISION				
	YES, HOW CAN THIS BE DONE?	NO, WHY CAN'T THIS BE DONE?			
ELIMINATION: Can the tasks be eliminated?					
SUBSTITUTION: Can the hazard be substituted for one that gives rise to a lesser risk?					
ISOLATION: Can the hazard be isolated from the worker(s) at risk?					
ENGINEERING: Can equipment be modified or can mechanical aids be provided?					
ADMINISTRATION: Can administrative controls be used such as a change in work practice, job rotation, training or a safe work procedure?					
PERSONAL PROTECTIVE EQUIPMENT (PPE): What PPE could be used to reduce risk to health?					
Management sign-off:			Date:		

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Health action and review plan record sheet

NSW mining and extractives industry

Instructions

8

PURPOSE AND OBJECTIVES:

The purpose of this 'health action and review plan record sheet' is to record what needs to be done to implement, evaluate and review the agreed control measures for each hazard.

The objectives are to:

- Identify risk management procedures that may need to be reviewed to include health risk management.
- Identify work procedures that need to be reviewed and updated to include health control measures.
- Identify training and supervision needs.
- Identify exposure monitoring and health surveillance.

PROCESS:

- As risk assessments are completed and control measures agreed record the information in the 'health action and review plan'.
- Identify what scheduled maintenance can be implemented to contribute to controls.
- For each control measure consider what risk management procedures (e.g. JSA's) or work procedures may need to be reviewed to accommodate the agreed control.
- For each control measure consider whether training is required to communicate any changes to risk management or work procedures.
- Determine what needs to be done to re-assess the risk control including exposure monitoring; set the dates and responsible persons.
- Control measures need to be reviewed regularly to ensure they continue to prevent or control exposures to health hazards.
- If a manager is not already involved have a manager sign off on the action and review the plan.

Implement



Health action and review plan record sheet

NSW mining and extractives industry

TOOL

8

Implement

Mine name:		Section:			Date:		
Person responsible for maintaining plan:				Induction updated (date):			
HAZARD AND SOURCE	CONTROL MEASURE	MAINTENANCE REQUIREMENTS	LIST RISK MANAGEMENT OR WORK PROCEDURES FOR REVIEW	TRAINING REQUIREMENTS	EXPOSURE MONITORING REQUIRED? YES/NO	REVIEW DATE	RESPONSIBLE PERSON
Management sign-off:					Date:		

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Health hazard register

NSW mining and extractives industry

PURPOSE AND OBJECTIVES:

The purpose of the health hazard register is to maintain a record of identified health hazards, control measures, exposure monitoring and health surveillance (if required).

In addition, it is a record to make health risk management information available to all people who may come into contact with health hazards and associated risks at the mine.

PROCESS:

- The information required for Tool 9 – ‘Health hazard register’ should essentially be already known. The previous tools should have identified much of the information required.
- Use an existing hazard register or the form attached to record the hazards, controls and any monitoring results.
- Have the responsible person, identified in Tool 4 – ‘Health responsibilities worksheet’ record relevant information and make the details available to workers who come into contact with hazards.
- Management should sign off the register.
- Record exposure monitoring and health surveillance if undertaken in regards to the hazard.
- Each review of the health hazards at the mine should generate an update to the register. How often you do that review should be based upon the particular health risks in the workplace.



Health hazard register

NSW mining and extractives industry

TOOL

9

Record

Mine name:			Section:			
Person responsible for maintaining register:			Date established:			
HEALTH HAZARD DETAILS	IDENTIFY HAZARD SOURCES (LIST SOURCES)	DATE LOGGED	IDENTIFIED CONTROL (INDICATE LEVEL ON HIERARCHY)	STATUS (OPEN/CLOSED)	REVIEW OF CONTROLS	
					RE-MONITOR	HEALTH SURVEILLANCE
Management sign-off:					Date:	

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Health Management Plan (HMP) evaluation

Instructions

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NSW mining and extractives industry

PURPOSE AND OBJECTIVES:

The purpose of the evaluation tool is to provide criteria for mine's to use to evaluate and review the Health Management Plan and determine how well health hazards and risks are managed within the mine Health and Safety Management Plan.

The objective of the evaluation and review tool is to:

- Assess whether actions taken as a result of completing the tasks set out in the toolkit have helped put in place a comprehensive plan to manage health hazards and risks.
- Highlight opportunities for further improvement.

PROCESS:

- Review the self-assessment results and note where the mine was positioned on the health management and culture maturity ladder at commencement:-
 - **Vulnerable to reactive** (just started) - the mine health and safety management system wasn't managing health risks.
 - **Compliant to proactive** (progressing) - the system managed health risks but health management was not well understood.
 - **Resilient** (done) - the system was working well, but the mine wanted to review and improve health management.
- Establish an evaluation team.
- Conduct a desk top review of health management documentation for each item in the evaluation tool.
- Talk to managers, supervisors, workers and contractors to determine whether the system is understood and used.
- Rate each item.
- Sum each of the ratings for the evaluation checklist element then find the average (rating total divided by the number of criterion).
- Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this tool.
- Compare your results.
- Provide the report to relevant management for the purpose of management review and action.

Evaluate



Health management plan evaluation

TOOL

10

NSW mining and extractives industry

Mine name:				
Mine contact:				
Auditors:			Date:	
Objective, Scope and Criteria: (e.g. 'To determine the extent of compliance with the Health Management Plan')				

MINE DETAILS	CIRCLE THE CORRECT ANSWER OR ONE THAT BEST REPRESENTS THE MINE				
Mine type:	Coal	Metal	Non-Metal	Quarry	Other
Sub-mine type:	Open Cut		Underground		Processing Plant
Number of workers (incl. full time contractors):	<10	10-50	50-100	>100	>1000
Does your mine have a HMP (can be an integrated system)?	NO		BASIC		ADVANCED

ELEMENT RANKING SCALE USED TO RATE ELEMENTS:	NOT STARTED	JUST STARTING		PROGRESSING		DONE
	0	1	2	3	4	5

Continue overleaf

The information contained in this publication is based on knowledge and understanding at the time of writing in February 2010. 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 Industry & Investment NSW or the user's independent adviser.



Industry & Investment

Evaluate

Continued from overleaf

Executive summary:	
Highlights:	
Lowlights:	
Recommendations:	

Evaluate

Element ranking summary

ELEMENT NUMBERS	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10	#11
ELEMENT RANKING:											

Continue overleaf

The information contained in this publication is based on knowledge and understanding at the time of writing in February 2010. 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 Industry & Investment NSW or the user's independent adviser.



Industry & Investment

1. CONSULTATION

Continue overleaf

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING					
A) Does the mine have an effective consultation process?		N/A	1	2	3	4	5
B) Are workers' OHS representatives involved in the process?		N/A	1	2	3	4	5
C) Is an organised workplace OHS committee part of the process? (For those mines with less than 20 employees, briefly describe the process)		N/A	1	2	3	4	5
D) Is consultation undertaken when:							
I. Assessments are made of risks to health and safety?		N/A	1	2	3	4	5
II. Decisions are made on measures to control or eliminate risks?		N/A	1	2	3	4	5
III. Changes are made to premises, systems or methods of work, or to plant or substances used for work, that may affect health safety or welfare at work?		N/A	1	2	3	4	5
IV. Decisions are made about the consultation arrangements?		N/A	1	2	3	4	5
Sum each of the ratings for this audit checklist element		Total of all ratings					
Then find the average (rating total divided by the number of criterion). Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.		Element #1 rating:					

Evaluate

2. HEALTH AND SAFETY POLICY

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING
A) Does your mine have a health and safety policy?		N/A 1 2 3 4 5
B) Was it developed in consultation with the workforce?		N/A 1 2 3 4 5
C) Does it contain statements of the mine's commitment to health and safety?		N/A 1 2 3 4 5
D) Does it outline the roles and responsibilities of all persons in the organisation with regards to health and safety?		N/A 1 2 3 4 5

Sum each of the ratings for this audit checklist element

Then find the average (rating total divided by the number of criterion).

Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.

Total of all ratings

Element #2 rating:

Continue overleaf

Evaluate

3. RISK ASSESSMENT

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING
A) Do you access and use occupational health and safety information when identifying hazards?	Provide details here.	N/A 1 2 3 4 5
B) Hazard identification was carried out by the following:		
I. Considering events and exposures that could realistically occur.	Provide details here.	N/A 1 2 3 4 5
II. Discussing with workers or their representatives any health concerns.	Provide details here.	N/A 1 2 3 4 5
III. Walking through and observing the workplace.	Provide details here.	N/A 1 2 3 4 5
IV. Examining available information on hazardous substances and equipment used at your mine.	Provide details here.	N/A 1 2 3 4 5
V. Evaluation of base line monitoring.	Provide details here.	N/A 1 2 3 4 5
Sum each of the ratings on this page for this audit checklist element		Total of ratings

Continue overleaf

Evaluate

3. RISK ASSESSMENT

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING
C) Risk assessments are carried out by:		
I. Consulting with all the relevant data sources.		N/A 1 2 3 4 5
II. Consulting with the workforce.		N/A 1 2 3 4 5
III. Obtaining advice from appropriate experts.		N/A 1 2 3 4 5
IV. Compiling a risk register that documents the prioritised risks.		N/A 1 2 3 4 5
V. Determining if the risk register is accessible to all people who might come in contact with the hazards and/or associated risks.		N/A 1 2 3 4 5
VI. Determining if the risk register is updated appropriately to indicate which risks have been eliminated or controlled adequately.		N/A 1 2 3 4 5
VII. Determining if the risk assessment makes reference to relevant standards, CoP etc.		N/A 1 2 3 4 5
Sum each of the ratings on this page for this audit checklist element		Total of ratings

Continue overleaf

3. RISK ASSESSMENT

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING
D) Are all identified risks properly controlled?		
I. Is the hierarchy of control adequately implemented?		N/A 1 2 3 4 5
II. Have the Safe Operating Procedures (methods of safe work) been developed in consultation with the relevant workers and supervisors?		N/A 1 2 3 4 5
III. Are the relevant workers and supervisors adequately trained to contribute to the development of these SOP?		N/A 1 2 3 4 5
IV. Are there clear guidelines for developing agreed operating procedures?		N/A 1 2 3 4 5
V. Are there evaluation measures in place to assess the effectiveness of the implemented control measures?		N/A 1 2 3 4 5
Sum each of the ratings on this page for this audit checklist element		Total of ratings

Continue overleaf

Evaluate

3. RISK ASSESSMENT

CRITERIA		EVIDENCE / COMMENTS	CIRCLE CORRECT RATING					
E) Have risk assessments been completed for the following health hazards?								
I.	Noise.		N/A	1	2	3	4	5
II.	Vibration causing musculoskeletal conditions.		N/A	1	2	3	4	5
III.	Diesel exhaust fumes.		N/A	1	2	3	4	5
IV.	Hazardous substances exposure causing dermatitis.		N/A	1	2	3	4	5
V.	Ergonomic stressors causing musculoskeletal conditions.		N/A	1	2	3	4	5
VI.	Ergonomic stressors causing back conditions.		N/A	1	2	3	4	5
VII.	Ergonomic stressors causing fatigue and related conditions.		N/A	1	2	3	4	5
VIII.	Psychosocial hazards causing psychological conditions.		N/A	1	2	3	4	5
IX.	Ultraviolet and ionising radiation.		N/A	1	2	3	4	5
X.	Other hazardous substances.		N/A	1	2	3	4	5
XI.	Atmospheric contaminants.		N/A	1	2	3	4	5
XII.	Other hazards specific to the mine e.g. biological hazards.		N/A	1	2	3	4	5
		Sum each of the ratings for this audit checklist element	Total of all ratings					
		Then find the average (rating total divided by the number of criterion). Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.	Element #3 rating:					

Continue overleaf

Evaluate

4. EXPOSURE MONITORING

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING					
A) Has exposure monitoring been undertaken for any of the following?							
I. Noise.		N/A	1	2	3	4	5
II. Vibration.		N/A	1	2	3	4	5
III. Diesel exhaust fumes including particulate matter.		N/A	1	2	3	4	5
IV. Heat or cold.		N/A	1	2	3	4	5
V. Coal dust.		N/A	1	2	3	4	5
VI. Silica.		N/A	1	2	3	4	5
VII. Asbestos.		N/A	1	2	3	4	5
VIII. Lead.		N/A	1	2	3	4	5
IX. Ionising radiation.		N/A	1	2	3	4	5
X. Other airborne substances.		N/A	1	2	3	4	5
B) Is there ongoing exposure monitoring?		N/A	1	2	3	4	5
Sum each of the ratings for this audit checklist element		Total of all ratings					
Then find the average (rating total divided by the number of criterion).		Element #4 rating:					
Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.							

Continue overleaf

Evaluate

5. TRAINING

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING
A) Does the new employee induction training identify all the occupational health hazards and required controls to which the worker may be exposed?		N/A 1 2 3 4 5
B) Do workers receive training when there are changes in the workplace?		N/A 1 2 3 4 5
C) Are workers and management adequately trained on how to properly include health issues in all OHS management plans?		N/A 1 2 3 4 5
D) Are all persons provided with training to be able to safety and effectively carry out their work?		N/A 1 2 3 4 5
E) Are all workers trained in safe operating procedures?		N/A 1 2 3 4 5
F) Are all supervisors trained (appropriate to their level and type of supervision) in their responsibilities and how to carry them out?		N/A 1 2 3 4 5

Sum each of the ratings for this audit checklist element

Then find the average (rating total divided by the number of criterion).

Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.

Total of all
ratingsElement #5
rating:

Continue overleaf

Evaluate

6. HEALTH SURVEILLANCE

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING
A) Is Health surveillance conducted? If so does this include:		
I. Pre-employment assessment.		N/A 1 2 3 4 5
II. Ongoing/periodic surveillance.		N/A 1 2 3 4 5
III. Post-employment surveillance.		N/A 1 2 3 4 5
IV. Audiometry.		N/A 1 2 3 4 5
V. Blood lead levels.		N/A 1 2 3 4 5
VI. Asbestos.		N/A 1 2 3 4 5
VII. Crystalline Silica.		N/A 1 2 3 4 5
VIII. Coal Dust.		N/A 1 2 3 4 5
IX. Other (please specify).		N/A 1 2 3 4 5

Sum each of the ratings for this audit checklist element

Then find the average (rating total divided by the number of criterion).

Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.

Total of all
ratings

Element #6
rating:

Continue overleaf

Evaluate

7. INJURY AND ILLNESS MANAGEMENT

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING					
A) Does the injury management plan include:							
I. An identified trained RTWC. (For those mines with less than 20 employees, briefly describe process)		N/A	1	2	3	4	5
II. Provisions of suitable duties for a person returning to work after a work-related injury or illness?		N/A	1	2	3	4	5
III. The provision of medical and ancillary services to enable an ill/injured worker to return to their previous level of functioning as soon as possible		N/A	1	2	3	4	5
Sum each of the ratings for this audit checklist element		Total of all ratings					
Then find the average (rating total divided by the number of criterion). Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.		Element #7 rating:					

Continue overleaf

Evaluate

8. EDUCATION AND AWARENESS

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING
A) Does the Health Management Plan include education and assistance in other areas such as:		
I. Health.		N/A 1 2 3 4 5
II. Fitness.		N/A 1 2 3 4 5
III. Wellbeing.		N/A 1 2 3 4 5
IV. Nutrition.		N/A 1 2 3 4 5
V. Employee Assistance Program (EAP).		N/A 1 2 3 4 5
B) Does the mine EAP include:		
I. Access for the worker's immediate family.		N/A 1 2 3 4 5
II. Provision for confidential counselling and related services for health problems not directly related to work.		N/A 1 2 3 4 5

Sum each of the ratings for this audit checklist element

Then find the average (rating total divided by the number of criterion).

Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.

Total of all ratings

Element #8 rating:

Continue overleaf

Evaluate

9. RECORDS MANAGEMENT		
CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING
A) For the records kept as part of the HMP:		
I. Are they stored in a secure place and in accordance with the Privacy Act?		N/A 1 2 3 4 5
II. Are they retained for at least the length of time specified under relevant legislation?		N/A 1 2 3 4 5
III. Is information on work related disease and injury recorded using Australian Standard AS 1885.1 as a basis?		N/A 1 2 3 4 5
IV. Are analyses performed to identify trends?		N/A 1 2 3 4 5
V. Are there systems in place that allow ongoing analysis and improvements?		N/A 1 2 3 4 5
VI. Are there systems in place that allow ongoing auditing to verify the adequacy and effective security of the records?		N/A 1 2 3 4 5
Sum each of the ratings for this audit checklist element		Total of all ratings
Then find the average (rating total divided by the number of criterion).		Element #9 rating:
Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.		

Continue overleaf

Evaluate

10. REPORTING

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING					
A) Are illnesses/injuries of greater than seven days lost time reported to the relevant authority?		N/A	1	2	3	4	5
B) Are any instances of high-risk work notified to the relevant authority?		N/A	1	2	3	4	5
C) Are all compensable matters reported to the relevant insurer within 48 hours of becoming aware?		N/A	1	2	3	4	5
D) Are all exceedances of occupational exposure standards reported to the relevant authority?		N/A	1	2	3	4	5
E) Are all results of health surveillance and high risk exposures reported to management and employee representatives?		N/A	1	2	3	4	5
F) Does the effectiveness or failure of control systems identified through reporting lead to prompt remedial action?		N/A	1	2	3	4	5
Sum each of the ratings for this audit checklist element		Total of all ratings					
Then find the average (rating total divided by the number of criterion). Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.		Element #10 rating:					

Continue overleaf

Evaluate

11. MONITORING AND EVALUATION OF THE HEALTH MANAGEMENT PLAN

CRITERIA	EVIDENCE / COMMENTS	CIRCLE CORRECT RATING					
A) Does the HMP include ongoing monitoring and evaluation of the effectiveness of the HMP?		N/A	1	2	3	4	5
B) Are indicators identified in the HMP to monitor its effectiveness? If so, do they include:							
I. The number or rate of workers compensation claims for illness.		N/A	1	2	3	4	5
II. The number of rate of Workers presenting for treatment of apparently work-related illness.		N/A	1	2	3	4	5
III. The health Surveillance/exposure monitoring results.		N/A	1	2	3	4	5
IV. Other (please specify).		N/A	1	2	3	4	5
C) Is the health management plan audited internally for effectiveness and continuous improvement?		N/A	1	2	3	4	5
Sum each of the ratings for this audit checklist element		Total of all ratings					
Then find the average (rating total divided by the number of criterion). Transfer the overall average rating for the element to the correct element score on the element rating summary at the front of this Tool.		Element #11 rating:					

Evaluate