Prevention of musculoskeletal disorders from

performing manual tasks in mining workplaces

Workshop resources

March 2010

Level 1, 303 Sevenoaks Street (cnr Grose Ave), Cannington WA 6107

Postal address: Mineral House, 100 Plain Street, East Perth WA 6004

Telephone: (08) 9358 8002 Facsimile: (08) 9358 8000

ResourcesSafety@dmp.wa.gov.au

[www.dmp.wa.gov.au](http://www.dmp.wa.gov.au) www.wa.gov.au

Contents

[Who’s responsible? 2](#_Toc255298817)

[Managing the risks associated with manual tasks – Who’s responsible? 3](#_Toc255298818)

[Guide and worksheets for case studies 4](#_Toc255298819)

[Case study guide 5](#_Toc255298820)

[Case study 1 6](#_Toc255298821)

[Case study 2 7](#_Toc255298822)

[Case study 3 8](#_Toc255298823)

**Acknowledgements**

This training package is based on the WorkSafe Western Australia publication *Preventing manual handling injuries in the workplace training package.*

The WorkSafe training package can be downloaded from the WorkSafe section of the Department of Commerce website at www.commerce.wa.gov.au/worksafe

The case studies included here are designed specifically for mining workplaces and were improved by industry feedback, including testing during the 2009 Mines Safety Roadshow presented by Resources Safety.

# Who’s responsible?

Print out one sheet for each participant.

## Managing the risks associated with manual tasks – Who’s responsible?

Read each statement and decide who is responsible for carrying it out. Tick the appropriate box or boxes. There may be more than one entity (individual or team) responsible. Only include individuals, teams or committees that are in your workplace. For example, if your workplace does not have a safety and health committee, do not allocate responsibilities to the committee.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Employees** | **Supervisors** | **Managers** | **OSH Officer** | **Safety and health representatives** | **Safety and health committee** | **Manual tasks** **risk management team** |
| **Reporting potential hazardous manual tasks** |  |  |  |  |  |  |  |
| **Reporting injuries from performing manual tasks** |  |  |  |  |  |  |  |
| **Reporting equipment issues and problems** |  |  |  |  |  |  |  |
| **Keeping hazard and injury records** |  |  |  |  |  |  |  |
| **Analysing hazard and injury records** |  |  |  |  |  |  |  |
| **Screening tasks to identify hazardous manual tasks** |  |  |  |  |  |  |  |
| **Assessing risks of hazardous manual tasks** |  |  |  |  |  |  |  |
| **Developing and implementing risk controls measures** |  |  |  |  |  |  |  |
| **Consulting with employees doing the task** |  |  |  |  |  |  |  |
| **Ensuring appropriate control measures**  |  |  |  |  |  |  |  |
| **Attending task specific manual task training** |  |  |  |  |  |  |  |
| **Following instructions on safe work practices** |  |  |  |  |  |  |  |

#  Guide and worksheets for case studies

For each participant, print out the case study guide and the case studies required.

You may wish to develop a case study including a scenario from the participant’s workplace using the same format.

Using short videos of tasks from the workplace is also useful during this activity.

## Case study guide

Complete the case studies in a small group. Use this guide and/or the risk assessment forms from your workplace to assist.

**Risk assessment**

*Risk factors*

* Movements/postures – repetitive or sustained and/or awkward
* Force – high, jerky, high speed
* Frequency/duration – how long/how often
* Work environment – cold, heat/humidity, wind, lighting, floor/ground surfaces and housekeeping
* System of work, work organisation and work practices
* Exposure to vibration – whole-body and/or hand–arm

*Source/s (underlying cause/s) of the risk*

* The work area design and layout
* Nature of load being handled
* Nature of the items being used (e.g. hand tools)
* Working environment (including exposure to vibration)
* Systems of work, work organisation, work practices

*Severity of risk*

* Low
* Medium
* High

**Risk control**

*Risk control measures*

* Eliminate the task
* Alter the design and layout of the workplace
* Alter the nature of the load (including using mechanical aids or assistive devices)
* Alter the nature of the items used/handled during manual tasks (including hand tools)
* Alter the working environment (including exposure to vibration)
* Alter work organisation and work practices, including systems of work

**Case study 1**

**Hazard identification**

A number of employees on your mine site have reported sore lower backs from loading and unloading their work utilities. There has recently been two serious lost time injuries (LTIs) associated with this task.

Most employees need to load and unload equipment and materials several times a day. The equipment and materials vary in size, shape and weight. Usually things are lifted to and from the back of the utility to and from the ground. The ground surface is often uneven. On many occasions, employees are working alone. The utilities have drop-down tray sides but these are rarely used and usually remain in the upright position. The heights of the utility tray and sides vary, but many are high enough so that workers are lifting or lowering near to or above shoulder height to clear the height of the tray sides.

**Risk assessment**

*Risk factors*

*Source/s (underlying cause/s) of the risk*

*Severity of risk*

**Risk control measures**

## Case study 2

**Hazard identification**

There has been a spike in musculoskeletal discomfort reports made to supervisors over the past three months. The reports are associated with the manual opening of isolation valves on the pipes at your process plant. During that time there has been one injury reported for a worker performing this task. Although it did not result in any lost time, the injured worker was on restricted duties for more than two weeks.

The location of the valves means workers have to bend and twist to access the opening mechanism. The force required to open the valve is often excessive and workers use a sledge hammer to loosen it. On occasions, it can take up to an hour to open a particularly difficult valve.

**Risk assessment**

*Risk factors*

*Source/s (underlying cause/s) of the risk*

*Severity of risk*

**Risk control measures**

## Case study 3

**Hazard identification**

It has become obvious there is a high turnover of excavator operators on your mine site. No incidents or injuries have been reported, but excavator operators take significantly more sick leave than is usual.

The excavator operators generally only get out of the excavator for morning, lunch and afternoon breaks, and therefore are sitting in the excavator for 2-3 hours without a break. The excavators transverse very rough ground. The operators often have to twist to see behind them. The operator’s seat in all the excavators have been upgraded to fully adjustable suspension seats. On observation, it is obvious the seats in the excavators have not been adjusted to suit individual operators.

**Risk assessment**

*Risk factors*

*Source/s (underlying cause/s) of the risk*

*Severity of risk*

**Risk control measures**