



**Australian Government**

# **MSMWHS201 Conduct hazard analysis**

**Release: 1**

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## Modification History

Release 1 - New unit

## Application

This unit of competency covers the skills and knowledge required to conduct a hazard analysis. These are typically called:

- job safety analysis (JSA)
- job hazard analysis (JHA)
- job safety and environmental analysis (JSEA)
- safe work method statement (SWMS)

It is not intended to apply to simpler routine hazard checks, such as 'Take 5', Step Back 5x5', five step or similar.

This might be done as an independent activity in order to identify hazards and the appropriate hazard controls, or it might be done as part of a broader process, such as identifying and applying for the permits required for a job.

The conducting of a hazard analysis may be required under a safety case, by organisation procedures or simply as being good practice.

This unit of competency applies to an individual working alone or as part of a team or group and working in liaison with other shift team members and the control room operator, as appropriate.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

## Pre-requisite Unit

Nil

## Competency Field

Work health and safety

## Unit Sector

## Elements and Performance Criteria

Elements describe the essential outcomes

Performance criteria describe the performance needed to demonstrate achievement of the element

- 1 Define the context for the hazard analysis
  - 1.1 Identify the scope and purpose of the hazard analysis
  - 1.2 Access the relevant forms or procedures for conducting a hazard analysis
  - 1.3 Identify specialised knowledge which may be required to conduct the hazard analysis
  
- 2 Identify hazards
  - 2.1 Find out job steps to be undertaken
  - 2.2 Identify hazards of job site
  - 2.3 Obtain specialised knowledge required
  - 2.4 Identify hazards for each job step
  - 2.5 Enter information into appropriate forms in accordance with procedures
  
- 3 Assess risks
  - 3.1 Estimate the potential severity/consequence of each identified hazard
  - 3.2 Consider how hazards may cause harm
  - 3.3 Estimate the likelihood/possible frequency of harm
  - 3.4 Use the organisation's risk matrix to prioritise each risk
  - 3.5 Enter information into appropriate forms in accordance with procedures
  
- 4 Control risks
  - 4.1 Apply organisation's risk control procedures
  - 4.2 Use the hierarchy of control so that risks are as low as reasonably practicable (ALARP)
  - 4.3 Specify risk controls
  - 4.4 Check the effectiveness of controls
  - 4.5 Identify residual risk and implement any additional controls required

		4.6	Enter information into appropriate forms in accordance with procedures.
5	Monitor and review risk controls	5.1	Monitor risk controls and review their effectiveness
		5.2	Keep records in accordance with procedures

## Foundation Skills

This section describes those language, literacy, numeracy and employment skills that are essential to performance.

Foundation skills essential to performance are explicit in the performance criteria of this unit of competency.

## Range of Conditions

This field allows for different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

### Regulatory framework

The latest version of all legislation, regulations, industry codes of practice and Australian/international standards, or the version specified by the local regulatory authority, must be used, and include one or more of the following:

- legislative requirements, including work health and safety (WHS)
- industry codes of practice and guidelines
- environmental regulations and guidelines
- Australian and other standards
- licence and certification requirements
- Dangerous Goods regulations
- Hazardous substances regulations
- Hazardous Substances Information System
- Major hazard facility requirements, if relevant
- AS 2865-2009 Confined spaces
- AS 1674 Set-2007 Safety in welding and allied processes (covers all hot work)
- AS 4024.1-2014 Series - Safety of machinery
- AS/NZ 1715:2009 Selection use and maintenance of respiratory protective equipment
- National Standard for Plant [NOHSC:1010 (1994)]

- National exposure standards for atmospheric contaminants in the occupational environment [NOHSC:1003 (1995)]

**Scope and purpose**

The scope includes the unique identification of the plant items and/or work area which is the subject of the hazard analysis, and by default the adjoining plant/areas.

The purpose includes undertaking one or more of:

- a routine hazard analysis for a work area
- a hazard analysis for a specified job
- a hazard analysis as a precursor to issuing permits
- other purposes defined by organisation procedures

**Procedures**

All operations must be performed in accordance with relevant procedures.

Procedures are written, verbal, visual, computer-based or in some other form, and include one or more of the following:

- permit control system
- emergency procedures
- work instructions
- standard operating procedures (SOPs)
- safe work method statements (SWMS)
- temporary instructions
- any similar instructions provided for the smooth running of the plant

**Hazards**

Hazards include one or more of the following:

- incomplete process isolations
- mechanical and electrical isolations not in place
- atmospheric testing incomplete and atmosphere unsafe
- smoke, darkness and heat
- heat, smoke, dust or other atmospheric hazards
- electricity
- gas
- gases and liquids under pressure
- structural hazards
- structural collapse
- equipment failures
- industrial (machinery, equipment and product)

- equipment or product mass
- noise, rotational equipment or vibration
- limited head spaces or overhangs
- working at heights, in restricted or confined spaces, or in environments subjected to heat, noise, dusts or vapours
- fire and explosion
- flammability and explosivity
- hazardous products and materials
- unauthorised personnel
- sharp edges, protrusions or obstructions
- slippery surfaces, spills or leaks
- extreme weather
- other hazards that might arise

**Specialised knowledge**

Specialised knowledge includes information sourced from one or more of the following:

- the person doing the job
- an internal or external technical specialist
- a health and safety expert
- other operational personnel
- literature or internet information
- incident and other records
- risk register
- other knowledge resources of the organisation

**Risk**

Risk requires the consideration of the consequences of an event and one or both of:

- likelihood/probability
- expected frequency

**Severity/consequence**

The severity or consequence is typically interpreted against a scale ranging from minor (may require first aid, no lost time, no damage to plant or environment) through to major (may result in death, significant damage to plant or environment)

**Harm from hazards**

Harm from hazards includes:

- exposure routes (ingestion, inhalation and skin/eye contact)
- chain of events (event/cause tree and bow tie)
- causal sequence which results in harm to persons, environment,

plant or product

## **ALARP**

ALARP means as low as reasonably practicable and requires:

- identifying the risk reduction measures available
- determining the level of risk reduction that can be achieved and the associated cost
- implementing the risk reduction measure unless the cost is grossly disproportionate to the benefits of the risk reduction
- justifying available measures that are not taken

## **Unit Mapping Information**

No equivalent unit.

## **Links**

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=d1287d36-dff4-4e9f-ad2c-9d6270054027>