



Australian Government

MSMWHHS201 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

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|---|--|-----|---|
| 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>

Assessment Requirements for MSMWHS201 Conduct hazard analysis

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Performance Evidence

Evidence required to demonstrate competence in this unit must be relevant to and satisfy the requirements of the elements and performance criteria and demonstrate the ability to:

- complete a hazard analysis
- specify risk controls to bring risks to ALARP
- identify relevant personnel
- complete appropriate hazard analysis forms (paper or electronic)
- monitor and review effectiveness of risk controls.

Knowledge Evidence

Evidence must be provided that demonstrates knowledge of:

- the significance of the analysis context
- how the identified hazards may cause harm
- purpose and use of the risk matrix
- monitoring and review of risk controls.

Assessment Conditions

- The unit should be assessed holistically and the judgement of competence based on a holistic assessment of the evidence.
- The collection of performance evidence is best done from a hazard analysis report and/or folio of evidence drawn from:
 - a single project which provides sufficient evidence of the requirements of all the elements and performance criteria
 - multiple smaller projects which together provide sufficient evidence of the requirements of all the elements and performance criteria.
- A third-party report, or similar, may be needed to testify to the work done by the individual, particularly when the project has been done as part of a project team.
- Assessment should occur in operational workplace situations. Where this is not possible, or where personal safety or environmental damage are limiting factors, assessment must occur in a sufficiently rigorous simulated environment reflecting realistic operational workplace conditions. This must cover all aspects of workplace performance, including environment, task skills, task management skills, contingency management skills and job role environment skills.

- Knowledge evidence may be collected concurrently with performance evidence (provided a record is kept) or through an independent process, such as workbooks, written assessments or interviews (provided a record is kept).
- Where part of a broader role it may be conveniently co-assessed with units relevant to that broader job.
- Assessment processes and techniques must be appropriate to the language, literacy and numeracy requirements of the work being performed and the needs of the candidate.
- Conditions for assessment must include access to all tools, equipment, materials and documentation required, including relevant workplace procedures, product and manufacturing specifications associated with this unit.
- The regulatory framework will be reflected in workplace policies and procedures and is not required to be independently assessed.
- Foundation skills are integral to competent performance of the unit and should not be assessed separately.
- As a minimum, assessors must satisfy the Standards for Registered Training Organisations 2015 assessor requirements.

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