



Australian Government

Department of Education, Employment and Workplace Relations

BSBOHS605B Apply occupational hygiene principles to control OHS risk

Revision Number: 1

BSBOHS605B Apply occupational hygiene principles to control OHS risk

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to apply occupational hygiene knowledge and the techniques to control occupational health and safety (OHS) risk arising from health hazards at work. No licensing, legislative, regulatory or certification requirements apply to this unit at the time of endorsement.
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Application of the Unit

Application of the unit	This unit provides for the application of occupational hygiene knowledge, skills and techniques to identify and assess the real or potential occurrence of chemical, physical or biological agents and other workplace stressors (including their interactions) that may affect the health or wellbeing of workers or others, and the recommendations for controls of such hazards. Other useful skills that support this unit are addressed in BSBOHS406B Use equipment to conduct workplace monitoring. The underpinning knowledge and skills required for this unit are outlined in BSBOHS504B Apply principles of OHS risk management and BSBOHS505C Manage hazards in the work environment, and include knowledge of systematic approaches to managing OHS.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

Elements describe the essential outcomes of a unit of competency.	Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Identify health hazards that may result from features of the workplace or working environment	1.1. Identify workplace factors that may affect the health of workers 1.2. Identify health hazards that may result from work processes, work operations, equipment and work procedures 1.3. Identify possible routes of entry to the body and consequent effects on the body for different workplace factors 1.4. Identify situations where OHS specialists and other advisors may be required
2. Analyse the risks of worker exposure to potentially harmful agents and factors	2.1. Determine sources of exposure and related factors to potentially harmful agents and factors in work processes and methods 2.2. Identify equipment, sampling plan and techniques for assessing the exposure to selected agents and factors within a workplace 2.3. Interpret and evaluate monitoring and sampling results to provide an assessment of exposure 2.4. Utilise exposure standards in the assessment of risks 2.5. Report workplace measurements, interpretations and recommendations to stakeholders in a suitable format for the target group
3. Design risk control strategies and advise on implementation	3.1. Apply the hierarchy of control to design risk control strategies, noting that personal protective equipment (PPE) is regarded as the least satisfactory control measure 3.2. Identify inadequacies in existing control measures and provide remedial advice 3.3. Develop, select and implement risk control measures when undertaking effective consultation and collaboration with organisation, affected employees and others 3.4. Access external sources of information and data , and specialist advisors as required, on nature of health hazard, level of risk, and risk control options
4. Monitor and evaluate control strategies to minimise workplace exposures	4.1. Monitor and regularly evaluate quality and outcomes of interventions in consultation with stakeholders and relevant employees 4.2. Facilitate modifications to interventions including consultations, as required, as a result of findings of

ELEMENT	PERFORMANCE CRITERIA
	regular evaluation and monitoring 4.3. Identify and document <i>training needs</i>, and arrange training in consultation with workplace stakeholders if required 4.4. Make recommendations regarding future interventions as a result of evaluation and monitoring

Required Skills and Knowledge

Required skills

- analytical skills to:
 - identify areas for improvement with OHS incidents
 - analyse relevant workplace information and data, and to make observations of workplace tasks and interactions between people, their activities, equipment, environment and systems
 - contribute to the assessment of resources needed to systematically manage OHS and, where appropriate, access resources
 - contribute to the strategic OHS performance of the organisation
- attention to detail when making observations and recording outcomes
- numeracy skills to:
 - carry out simple arithmetical calculations (e.g. % change) and to produce graphs of workplace information and data, to identify trends and recognise limitations of information and data
 - interpret results from workplace measurements
 - use electronic information and data systems to enter workplace information and data, and to produce effective graphical representations
 - use measuring equipment including reading scales and dials applicable to selected hazards
- research skills to access relevant OHS information and data to interpret information and data, to identify areas for improvement
- communication skills to:
 - conduct effective formal and informal meetings and to communicate effectively with personnel at all levels of the organisation, OHS specialists and, as required, emergency services personnel
 - write policies, procedures and plans
 - use language and literacy skills appropriate to the workgroup and the task
- consultation and negotiation skills to develop plans, and to implement and monitor designated actions
- project management skills to achieve continuous improvement and change
- organisational skills to manage own tasks within a timeframe
- information technology skills to access and enter internal and external information and data on OHS and to use a range of media

Required knowledge

- characteristics of sound and vibration, units of noise, sound pressure levels, noise dose and process of hearing loss
- characteristics, mode of action and units of measurement of major hazard types
- difference between hazard and risk
- difference between ionising and non-ionising radiation, and the principles of decay and the effect of radiation on the body

Required skills

- different categories of chemicals such as dangerous goods, hazardous substances, poisons, carcinogens
- direct and indirect influences that impact on OHS and the environment in the design of product/s
- effect of electricity on the body and the difference in action of fuses/circuit breakers and resident current devices
- ethics related to professional practice
- exposure standards, their limitations and their practical use
- formal and informal communication and consultation processes, and key personnel related to communication
- hierarchy of control and considerations for choosing between different control measures, such as possible inadequacies of particular control measures
- how the characteristics and composition of the workforce impact on risk and the systematic approach to managing OHS, for example:
 - labour market changes
 - structure and organisation of workforce e.g. part-time, casual and contract workers, shift rosters, geographical location
 - language, literacy and numeracy
 - communication skills
 - cultural background/workplace diversity
 - gender
 - workers with specific needs
- internal and external sources of OHS information and data
- key personnel, including identifying 'change agents', within workplace management structure
- language, literacy and cultural profile of the work group
- legislative requirements for OHS information and data, and consultation
- limitations of generic hazard and risk checklists, and risk ranking processes
- mathematical knowledge of units of measurement, logarithmic scales, decimals and order of magnitude relevant to making and interpreting measurements
- nature of workplace processes (including work flow, planning and control) and hazards relevant to the particular workplace
- organisational behaviour and culture as it impacts on OHS and on change
- organisational culture as it impacts on the workgroup
- organisational OHS policies and procedures
- other functional areas that impact on the management of OHS
- pertinent sections of relevant Australian and other standards such as AS/NZS 4360: 2004 Risk management, National Standard for the Storage and Handling Workplace Dangerous Goods [NOHSC: 1015(2001)] and National Standard for Manual Handling [NOHSC: 1001 (1990)]
- physiology related to temperature control of the human body, hazards of working in hot environments and appropriate controls

Required skills

- physiology relevant to understanding mode of action of physical, biological and chemical agents on the body and how they produce harm
- principles and practices of a systematic approach to managing OHS
- principles of duty of care including concepts of causation, foreseeability, preventability
- requirements for control of work permits/written authorities in workplace monitoring activities
- requirements for individual fitting, use, maintenance and storage of a range of PPE items
- requirements for selection and limitations of use of a range of PPE items
- requirements under hazard-specific OHS legislation and codes of practice
- risk as a measure of uncertainty and the factors that affect risk
- role of control programs for microbiological hazards such as vaccination, local ventilation, decontamination
- roles and responsibilities under OHS legislation of employees including supervisors, contractors, OHS inspectors
- roles and responsibilities in relation to communication and consultation for OHS committees, OHS representatives, line management, employees and inspectors
- sampling methodologies, application and related statistical measures
- sources of occupational disease and their prevention
- standard industry controls for a range of hazards
- toxicology of hazardous materials and potential health effects in the workplace
- types of hazard identification tools including job system analysis (JSA)
- types of hazardous dusts and fibres, hazardous environments, and the possible ill health outcomes from exposure to dusts, particles
- types of measurement and monitoring equipment, including intrinsically safe equipment, calibration requirements and principles of how the equipment takes the measurement and limitations in use

Evidence Guide

EVIDENCE GUIDE

The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.

Overview of assessment

Critical aspects for assessment and evidence required to demonstrate competency in this unit

Evidence of the following is essential:

- application of hygiene interventions to control OHS risk in work design processes and the work environment
- products developed for application of knowledge and skill in hygiene interventions
- how these products were developed
- use of these products
- knowledge of toxicology of hazardous materials and potential health effects in the workplace.

Context of and specific resources for assessment

Assessment must ensure:

- access to relevant legislation, standards and guidelines
- access to workplace for identification and measurement activities.

Method of assessment

A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:

- analysis of responses to case studies and scenarios
- direct questioning combined with review of portfolios of evidence and third party reports of on-the-job performance by the candidate
- demonstration of techniques used to apply occupational hygiene principles to control OHS risk
- observation of performance in role plays
- observation of presentations
- oral or written questioning to assess knowledge of principles to control OHS risk
- review of authenticated documents from the workplace or training environment
- evaluation of monitoring and sampling results
- assessment of reporting of workplace measurements, interpretations and recommendations to stakeholders

EVIDENCE GUIDE	
	• review of documented training needs and training arranged as a result of these needs • evaluation of reports on occupational hygiene programs.
Guidance information for assessment	Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example: • BSBOHS406C Use equipment to conduct workplace monitoring • BSBOHS504B Apply principles of OHS risk management • BSBOHS505C Manage hazards in the work environment.

Range Statement

RANGE STATEMENT

The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.

Workplace factors may include:

- chemical agents such as:
 - solids
 - liquids
 - gases
 - hazardous or non hazardous substances
 - toxins
 - vapours
 - dusts
 - mists
 - fibres
 - chemical hazards occurring through airborne exposure and through skin contact
 - other chemical contaminants arising through direct use or as by-product contaminants
- physical agents such as:
 - noise
 - vibration
 - pressure
 - light
 - thermal
 - ionising and non-ionising radiation
- biological agents such as:
 - viruses
 - bacteria
 - zoonoses
 - animals
 - animal products
 - plants and plant products
 - allergens that may induce asthma, dermatitis
- ergonomic factors such as:

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	- body position in relation to use of equipment or controls/awkward postures - harmful repetitive work - psychosocial factors such as: - exposure to harmful/psychological stress at work due to work demand, environment.
Hazards may include:	source or situation with a potential for harm in terms of human injury or ill health, damage to property or the environment, or a combination of these.
OHS specialists and other advisors may include:	- allied health - engineers (ventilation, mechanical, chemical, electrical) - equipment manufacturers and suppliers - ergonomists - injury management and return to work advisors - internal and external OHS professionals - occupational health advisors - specialist occupational hygienists - substance manufacturers, importers and suppliers - toxicologists.
Sources of exposure may include:	- needle stick exposures - noise etc. produced by plant and machinery - occupationally related contact - substances/products created or generated by work processes, for example fume, carbon monoxide and dust - working with animals and animal products.
Related factors may include:	- dose related impacts - synergistic/potential effects (increased effects of multiple exposures) compared with antagonistic effects (lessening effects of two or more substances than the effect of each in isolation).
Exposure standards may include:	- established concentrations of substances that are given as guidance in assessing the risk of exposure - state/territory, national and/or international publications.
Hierarchy of control may	eliminating hazards

RANGE STATEMENT	
include:	• and where this is not practicable, minimising risk by: • substitution • isolating the hazard from personnel • using engineering controls • using administrative controls (e.g. procedures, training) • using PPE.
Personal protective equipment may include:	• equipment designed to be worn by a person to provide protection from hazards, such as: • clothing and footwear • face and eye protection • hand protection • head protection • hearing protection • respiratory protection.
External sources of information and data may include:	• academic institutions, centres of research and libraries • American Conference of Governmental Industrial Hygienists (ACGIH) • Australian Safety and Compensation Council • Australian Standards, national codes of practice, guidance notes • Commonwealth Scientific and Industrial Research Organisation (CSIRO) • databases such as National Industrial Chemicals Notification and Assessment Scheme (NICNAS) • engineers • external OHS professionals and specialists • manufacturers' manuals and specifications • material safety data sheets (MSDSs) • National Health and Medical Research Council (NHMRC) • OHS professional associations • state and territory OHS regulatory bodies • union and employer associations • Workplace Exposure Standards (WES).
Training needs may include:	• correct selection, use, servicing, storage and disposal of PPE

RANGE STATEMENT

	• interpretation of information and data contained in MSDSs, technical documents or brochures about substances, tools, equipment and plant • legislative requirements • maintenance of equipment, tools and plant to ensure effective performance of control systems • methods of minimising exposure • personal hygiene • requirements for health monitoring of use of certain workplace hazardous substances such as lead • risks associated with specific tasks • workplace housekeeping.
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Unit Sector(s)

Unit sector	
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Competency field

Competency field	Regulation, Licensing and Risk - Occupational Health and Safety
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Co-requisite units

Co-requisite units		