



Australian Government

Department of Education, Employment and Workplace Relations

MTMPS5608C Manage environmental impacts of meat processing operations

Release: 1

MTMPS5608C Manage environmental impacts of meat processing operations

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit covers the skills and knowledge required to assess the potential impacts of enterprise operations on the environment and implement cost effective strategies. Management of environmental impact is a priority across all sectors of the industry and the industry has made a considerable investment in developing best practice systems for the management and minimisation of environmental impact. The scope of the unit includes water quality, usage and waste, air quality, emissions, noise, odour, and the minimisation and disposal of solid wastes.
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Application of the Unit

Application of the unit	This unit is suitable for managers with responsibility for environment matters and for plant engineers, production managers, chiller managers, quality managers working in a meat industry context. At this level individuals exercise considerable autonomy, responsibility and accountability within enterprise structures and are required to make primary contributions to the values, goals and operations of the enterprise. They will typically have responsibility for the establishment and review of systems for the site or department. They may work with the assistance of external experts to develop plans and strategies.
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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. Determine environment management strategy requirements	1.1. Enterprise's ethical, community and legal obligations for environmental management are ascertained. 1.2. Enterprise operations are examined to identify potential environmental impacts. 1.3. Competitive and economic advantages and disadvantages of environmental management strategies are analysed.
2. Develop enterprise commitment to environmental management	2.1. Management commitment is obtained and enterprise environmental management policy formulated. 2.2. Agreed environmental management strategies are built into enterprise planning, operating systems and review processes. 2.3. Consultative processes are developed to resolve environmental issues and problems. 2.4. Environmental management roles and responsibilities are incorporated into job functions, position descriptions and Standard Operating Procedures (SOPs). 2.5. Communication and training strategies to inform and support stakeholder commitment are developed and implemented.
3. Prepare environmental management strategy	3.1. Enterprise requirements for expert assistance and advice are identified. 3.2. Environmental risks are identified and evaluated. 3.3. Requirements of environmental management systems are determined. 3.4. Alternative environmental management strategies and systems are evaluated for efficiency, effectiveness and sustainability, according to enterprise requirements and regulatory compliance. 3.5. Opportunities for minimising environmental impact and maximising commercial value of waste or waste treatment by-products are identified. 3.6. Resource requirements are calculated and included in enterprise planning processes. 3.7. Performance criteria for environmental management are developed.
4. Implement and monitor environmental	4.1. Licences, permits, schedules and agreements are negotiated with regulatory requirements. 4.2. Environment and waste management policies and

ELEMENT	PERFORMANCE CRITERIA
management strategies and systems	responsibilities are communicated to stakeholders. 4.3. Environmental and waste management systems are selected, developed, implemented and integrated into operational systems. 4.4. Monitoring, reporting and validation procedures are developed. 4.5. Corrective action strategies and contingency plans are prepared. 4.6. Verification procedures are established. 4.7. Causes of non-compliance are investigated and control measures developed. 4.8. Systems are reviewed to reflect changes in technology, regulations and operational performance.
5. Review environmental management policies, strategies and systems	5.1. Continuous review and improvement processes, including consultation with stakeholders, are established. 5.2. Performance information is assessed and analysed against specified criteria and standards to identify areas for improvement. 5.3. Conclusions and recommendations are analysed and included in enterprise planning and improvement processes.
6. Manage community relations	6.1. Environmental impact statements are prepared to address community, environmental and public health concerns and regulatory requirements. 6.2. Interactions with environmental authorities and agencies are conducted openly, positively and ethically. 6.3. Opportunities to promote the enterprise as a good corporate citizen in environmental management are identified and utilised. 6.4. Enterprise measurement and logging of environmental impacts is maintained, analysed and reported to stakeholders. 6.5. Community complaints are dealt with promptly, openly and courteously.

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

Ability to:

- analyse and interpret current regulatory requirements, including local, state, national and international, for environmental management, such as environmental tolerance levels, and explain the implication for enterprise operations
- assess viability of gaining commercial value from waste, including the determination of commercial quantities, costs, returns and payback periods
- apply relevant **mathematical** and **communication skills**
- communicate effectively with internal and external personnel with diverse roles and cultures
- comply with regulatory requirements for managing enterprise environmental impact, including negotiation of agreements, plans, permits and licences with relevant environmental management authorities, confinement of environmental impacts within permissible limits and preparation of the enterprise for external audit where specified
- consult with internal/external stakeholders and external agencies to prepare contingency plans and emergency response procedures for environmental incidents
- develop individual and team capacity to achieve enterprise management policies and goals, including clear communication of individual and team responsibilities for minimising environmental impact, development of consultative processes and strategies to identify and resolve environmental issues, and identification and provision of appropriate training programs
- develop procedures for responding to community complaints and concerns
- evaluate and recommend environmental management systems to meet enterprise needs, including the identification and audit of enterprise creation of waste and environmental impacts and evaluation of control and treatment systems suitable for enterprise operations, comparative costs, savings and minimisation of environmental impacts, such as **wastewater disposal, measures to minimise nutrients** and other contaminants in water, e.g. strategies to control **air pollution, odour treatment processes** and managing **solid waste**
- identify and apply relevant **Occupational Health and Safety (OH&S)**, regulatory and **workplace requirements**
- implement enterprise environmental management systems to minimise environmental impact, including the establishment of monitoring and testing regimes and record keeping systems; development of procedures for identifying, reporting and analysing the causes of environment non-conformances and incidents; development of control measures to prevent recurrence of environmental incidents, hazardous events and non-conformances
- monitor performance of the enterprise environmental management system, including the identification of performance standards based on industry best practice; collection and analysis of qualitative and quantitative performance data;

REQUIRED SKILLS AND KNOWLEDGE

benchmarking; assessment of performance against standards and recommendations for improvement

- prepare and update enterprise environmental impact statements and environment management plans
- prepare information about the enterprise's environmental management strategy and progress for release to the public, consistent with enterprise ethical standards and regulatory requirements
- prepare **reports** and recommendations for senior management, using analysis of complex information and language, and presentation styles appropriate for the purpose
- present reports according to legal and enterprise requirements
- take action to improve own work practice as a result of feedback from others, self-evaluation, or in response to changed work practices and requirements or technologies
- utilise effective communication, negotiation and problem-solving skills in interactions with all stakeholders, including environmental authorities and agencies and community representatives
- utilise information and communications technology for research, data collection and analysis and reporting, including the use of statistical and modelling software, where available.

Required knowledge

Knowledge of:

- potential costs of prevention, assessment and control of environmental impact
- customer and consumer, including importing country, requirements for effective environmental management and the implications for enterprise operations
- enterprise requirements for **expert advice, assistance** and support
- major air, water and solid waste environmental impacts generated by the meat industry
- relevant environmental authorities, their jurisdictions, powers and the implications for enterprise operations.

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

The meat industry has specific and clear requirements for evidence. A minimum of three forms of evidence is required to demonstrate competency in the meat industry. This is specifically designed to provide evidence that covers the demonstration in the workplace of all aspects of competency over time.

These requirements are in addition to the requirements for valid, current, authentic and sufficient evidence.

Three forms of evidence means three different kinds of evidence - not three pieces of the same kind. In practice it will mean that most of the unit is covered twice. This increases the legitimacy of the evidence.

All assessment must be conducted against Australian meat industry standards and regulations.

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

Competency must be demonstrated through sustained performance over time, at an appropriate level of responsibility and authority under typical operating and production conditions for the enterprise.

Context of and specific resources for assessment

Resources may include:

- a workplace environment with typical operating and production conditions
- enterprise system information, including company Environmental Protection Authority (EPA) licences, environmental performance reports and data.

Method of assessment

Recommended methods of assessment include:

- a third-party referee report of sustained performance at appropriate level of authority and responsibility
- assignment focusing on understanding and application of principles and theory to workplace operations
- workplace projects with focus on company environment and conditions.

EVIDENCE GUIDE	
	Assessment practices should take into account any relevant language or cultural issues related to Aboriginality or Torres Strait Islander, gender, or language backgrounds other than English. Language and literacy demands of the assessment task should not be higher than those of the work role.
Guidance information for assessment	A current list of resources for this unit of competency is available from MINTRAC www.mintrac.com.au or telephone 1800 817 462.

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.	
<i>Environmental management strategies</i> may include:	• alternative energy sources and configurations • further processing of waste for commercial purposes • minimisation strategies (e.g. plant, technology and equipment design and replacement, systems review, process and work flow redesign) • recycling, reuse and recovery of liquid and solid waste.
<i>Stakeholders</i> and external agencies may include:	• community groups, including neighbours, residents, environment and conservation groups • company owners, directors, shareholders and financiers • customers and consumers • emergency services • employees • enterprise departments, divisions and sections

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	• environment protection authorities and agencies • governments and government agencies (federal, state, territory and local) • industry groups and associations, including employee, employer, professional and technical groups • regulatory authorities.
Environmental management systems may include:	• consultation requirements • qualitative assessment techniques • sampling and measurement schedules, methods and requirements • sustainability targets.
Regulatory requirements may include:	• animal welfare • AS 3595-1990 Energy management - Guidelines for financial evaluation of a project • AS/NZ ISO 14001:2004 Environmental Management Systems - Requirements with Guidance for Use • AS/NZ ISO 14040:1998 Environmental Management Systems - Life Cycle Assessment - Principles and Framework • AS/NZ ISO 19011:2003 Guidelines for Quality and/or Environmental Management Systems Auditing • Australian covenants and codes of practice on packaging disposal • commercial law, including fair trading and trade practices • consumer law • corporate law, including registration, licensing and financial reporting • environmental and waste management • environmental protection, conservation and sustainability requirements • Equal Employment Opportunity (EEO), anti-discrimination and sexual harassment • Export Control Act • industrial awards, agreements • licensing requirements and conditions (e.g. export meat order requirements for potable water and food safety)

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	• planning permission, including solid and liquid waste disposal, odours, plant noise, and impact of road transport/traffic (e.g. noise) • pollution control licences • public health requirements • relevant regulations, such as state and territory regulations regarding meat processing • taxation • United Nations Educational, Scientific and Cultural Organization (UNESCO) and World Health Organisation (WHO) covenants and agreements.
Environmental impacts may include:	• air pollution (e.g. odour, noise, ozone depletion and contamination) • soil degradation (e.g. solid and liquid waste) • water pollution (e.g. effluent and liquid waste, and solid waste).
Mathematical skills may relate to:	• complex actual and hypothetical • technical and financial modelling • calculations • interpretation • analysis. • complex actual and hypothetical mathematical information, such as: • product and product quality • financial operations • personnel • operations • sales and turnover • exports.
Communication skills may:	• be with culturally, ethnically and socially diverse individuals and groups • involve preparation of reports which may be complex, contain information from a range of technical sources and include mathematical and graphic information and data • involve reading and interpreting workplace documentation • occur in a variety of sensitive, conflictive, collaborative and supportive environments • be formal or informal and involve face to face

RANGE STATEMENT	
	- and technological/electronic methods • require analysis and presentation of complex concepts, technical information, mathematical information and other data in simple or complex formats • require persuasion, negotiation and assertiveness skills.
Wastewater disposal options may include:	• biological treatments • disposal to surface waters • land disposal • primary and secondary treatment process • screening, flotation and evaporation • sewer disposal • wastewater recycling.
Measures to minimise nutrients and other contaminants in water may include:	• dry cleaning before wash down • improved manual plug change over for blood pit plug • improved screening/filters in treatment plans and floor drains screens • pondage, purification and filtering • primary screening.
Air pollution may include:	• noise (e.g. on site operations and transport) • odours related to production and transport on lairage of large animals • vapours, gases (e.g. greenhouse gases), solids fallout.
Odour treatment processes may be physical, chemical or biological and include:	• activated carbon • biofilters and bioscrubbers • chemical oxidation (e.g. wet chemical scrubbing or ozonisation) • dispersion (e.g. extraction hoods and dispersion stacks) • thermal oxidation (e.g. incineration).
Solid waste may include:	• animal waste (e.g. non-commercial value hides and manure) • meat and meat products (e.g. fat, bone and flesh) • packaging materials (e.g. cardboard cartons, paper/plastic liners, vacuum packs and binding tapes) • refuse from non-processing operations (e.g.

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	canteen, offices and amenities) • smallgoods manufacturing, processing, rendering and further processing wastes (e.g. fat, meat and meat product trimmings, rejects and returns, paunch manure, waste from fly ash boilers, oil and grease trap waste, and sludge) • solids suspended in effluent. Methods of managing solid waste may include: • composting • filtration, effluent treatment/settling ponds • identification of alternative products (e.g. biodegradable packaging) • incineration.
OHS requirements may include:	• enterprise OH&S policies, procedures and programs • hygiene and sanitation requirements • OH&S legal requirements • Personal Protective Equipment (PPE) which may include: • coats and aprons • ear plugs or muffs • eye and facial protection • head-wear • lifting assistance • protective boot covers • protective hand and arm covering • protective head and hair covering • uniforms • waterproof clothing • work, safety or waterproof footwear • requirements set out in standards and codes of practice.
Workplace requirements may include:	• enterprise-specific requirements • OHS requirements • Quality Assurance (QA) requirements • Standard Operating Procedures (SOPs) • the ability to perform the task to production requirements

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	work instructions.
Benchmarking may include working with:	- companies from other industries - internal departments - international or national industry standards - other companies or sites within the industry.
Reports may:	- include analysis and response to complaints - include evaluation of alternative environmental management strategies and controls - include financial reports (e.g. cost/benefit analyses and budget reports) - include performance information, audit reports and environment management reports to meet licensing requirements - be complex - contain information from a range of technical sources and include mathematical and graphic information and data - need to be presented according to legal and enterprise requirements.
Expert advice and assistance may be sought from:	- environmental engineers - environmental agencies - government departments.

Unit Sector(s)

Unit sector	
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Co-requisite units

Co-requisite units		

Competency field

Competency field	
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