



Australian Government

Department of Education, Employment and Workplace Relations

FDFST5030A Develop, manage and maintain quality systems for food processing

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Modification History

April 2012: Minor typographical corrections.

Unit Descriptor

This unit covers the skills and knowledge required to develop, manage and maintain quality systems for food processing. It also covers the skills and knowledge needed to lead people, manage systems and build quality into all enterprise systems and operations. The development and management of quality systems affects the ability of the enterprise to operate in specific markets and influences customer and consumer confidence in enterprise products.

Application of the Unit

This unit applies to Quality Assurance (QA) managers and personnel, production managers and supervisors operating in a food processing context. At this level individuals exercise considerable 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.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Not applicable.

Employability Skills Information

This unit contains employability skills.

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.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Establish requirements of the quality system	1.1 Policies expressing the organisation's commitment to the quality system and processes are developed 1.2 Legislative requirements for enterprise quality systems are identified 1.3 Scope and objectives of the quality system are determined, including links with all enterprise operations, customers, suppliers and contractors 1.4 Quality performance standards, including customer and supplier service standards, are established consistent with the direction and goals of the enterprise 1.5 Resource requirements are identified and included in financial, human resource and operational plans
2. Design and prepare for the quality system	2.1 Quality systems are selected and designed to meet enterprise, customer and regulatory requirements 2.2 Quality principles are applied to all enterprise operations to achieve business goals and performance standards 2.3 Responsibilities for development, implementation and operation of the system are clearly defined and communicated 2.4 Personnel from all levels and areas of the organisation are involved in the development and implementation of the quality system 2.5 System components, procedures and supporting documentation are developed and validated 2.6 Consultative and communication strategies are developed to link the quality system with all aspects of enterprise operations 2.7 Supplier or contractor service standards and audit requirements are determined and negotiated 2.8 The quality system is designed and prepared for 2.9 Performance measures and indicators are developed to measure performance against policies, goals and performance standards
3. Implement and monitor the quality system	3.1 Implementation plan is prepared and resourced 3.2 Training plans to provide personnel at all levels with quality concepts and skills are prepared and resourced 3.3 Quality system requirements and customer focus are addressed in the establishment, operation and evaluation of all enterprise systems 3.4 Control and preventative action measures are identified and validated 3.5 Corrective action procedures are developed and monitored 3.6 Procedures for reporting, recording and responding to non-conformances and non-compliances are established 3.7 Customer and supplier service standards are monitored and documented 3.8 Quality data is collected and analysed, and implications reported

ELEMENT	PERFORMANCE CRITERIA
	3.9 Quality costs and performance are monitored
	3.10 Quality system is prepared for external review and approval by relevant authorities
4. Continuously improve the quality system	4.1 Impacts of the quality system on enterprise operations are monitored and reviewed
	4.2 Responses to customer complaints and requests are resolved and used to improve the system
	4.3 Procedures for the ongoing identification and resolution of issues are established
	4.4 Quality system is updated for changes in process, technical information, customer and regulatory requirements
	4.5 Stakeholders are included in decision making and continuous improvement processes and strategies
	4.6 Quality results, findings and conclusions are fed into improvement processes
	4.7 Costs and benefits of the quality system are analysed
	4.8 Quality goals and targets are continuously reviewed
5. Communicate quality outcomes	5.1 Certification of product and processes consistent with quality outcomes is completed according to customer and regulatory requirements
	5.2 Regulatory authorities and agencies are promptly notified of breaches and non-compliance incidents
	5.3 Quality outcomes are used to promote public confidence in enterprise products and services

Required Skills and Knowledge

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

Required skills include:

Ability to:

- analyse complex statistical data and prepare corrective responses to non-conformances and variations identified in the data, relevant to enterprise quality systems and operations
- apply quality concepts and tools to problem-solving and the development of quality data collection, data management systems and analysis strategies
- apply substantial product and process knowledge to the development of the quality system and the interpretation of quality data
- communicate quality goals, requirements and findings to stakeholders in formats and styles appropriate to the context and purpose
- consult, negotiate with and report to regulatory authorities openly and promptly, consistent with enterprise ethical standards. This includes the notification of breaches and the preparation of non-compliance reports
- develop consultative and feedback procedures and opportunities for identification and resolution of quality issues and problems
- develop continuous improvement processes and team building using the 'plan, do, check, act' cycle
- develop quality policies for the enterprise in consultation with senior management and other stakeholders
- develop workforce commitment, capability and responsibility for the quality system. This involves identifying, negotiating and scheduling training, inclusion of responsibilities and duties relating to quality system implementation and integration in all job descriptions and work instructions, clear communication of responsibilities and requirements, delegation of tasks and responsibilities and inclusion of the workforce in consultative and continuous improvement processes
- ensure the quality system meets legislative and regulatory requirements
- exercise judgement, pragmatism and quality knowledge in the management and resolution of quality issues and problems
- identify and apply relevant OH&S and workplace requirements
- identify and describe process capability
- identify appropriate monitoring systems and strategies to support the enterprise quality system
- identify the applicable quality standards, regulations, codes, and legislation and customer requirements for the quality system and explain the implications for the enterprise
- identify research and update sources of quality information and advice including technical and regulatory information to support enterprise quality system
- lead personnel (e.g. Hazard Analysis Critical Control Point (HACCP) team, management, quality team, meat inspection team, laboratory, maintenance teams, processors and operators) in the implementation and improvement of the quality system
- monitor and analyse the costs of the quality system, including prevention costs, appraisal

costs, total quality costs and failure costs

- monitor and certify processes and product to meet third party requirements (eg importing country, public health requirements, customers)
- oversee audit processes (internal and external), act on audit findings and provide feedback to personnel for improvement of the system
- oversee the preparation for third party certification (where appropriate)
- plan and resource the enterprise training strategy, consistent with regulatory requirements to assist personnel at all levels in the implementation of the quality system
- prepare and sign off quality policies, manuals and documentation for the enterprise, including the preparation and updating of preventative, corrective and responsive procedures and strategies, supplier criteria and specifications, supplier and contractor audit requirements
- prepare quality implementation plans, identifying goals, key personnel and areas, resources, strategies, timelines and milestones
- present reports according to legal and enterprise requirements
- resolve customer complaints promptly and provide corrective action responses
- use appropriate questioning, observation, listening and recording skills in the collection and monitoring of quality data
- where quality systems are based on HACCP principles or good manufacturing practice, explain these principles and the implications for the enterprise quality system
- apply relevant communication and mathematical skills.

Required knowledge includes:

Knowledge of:

- the key concepts, philosophies and tools of quality management
- the management and organisational structure of the enterprise and its impact on enterprise systems
- the role audits play in a quality system
- documentation requirements of the quality system (including levels) and their roles in the functioning of the system, including the requirement for effective and secure quality record-keeping systems
- enterprise goals and directions and their implications for the quality system
- the legal requirements for the establishment and maintenance of the enterprise QA system including responsibilities for reporting breaches to authorities and implementing audit findings
- the principles and functions of hazard analysis and control, validation (including auditing) and verification in quality systems.

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	A person who demonstrates competency in this unit must be able to develop, manage and maintain quality systems for food processing. Evidence is also required in the ability to lead people, manage systems and build quality into all enterprise systems and operations.
Critical aspects for assessment and evidence required to demonstrate competency in this unit	Competency must be demonstrated in the ability to perform consistently at the required standard. In particular, assessors should look to see evidence of the ability to: develop and document quality system procedures to enterprise and legislative requirements; to implement the quality systems in a typical food production process including establishing responsibilities, training requirements and reporting arrangements; to collect and analyse process control data and other data and recommend quality system improvements; and to develop procedures to deal with non-conformance in relation to quality system requirements.
Context of and specific resources for assessment	Assessment of performance requirements in this unit should be undertaken within the context of food technology. Competency is demonstrated by performance of all stated criteria, including the critical aspects and knowledge and skills elaborated in the Evidence Guide, and within the scope as defined by the Range Statements applicable to the workplace environment. Assessment must occur in a real or simulated workplace where the assessee has access to: • Production process and related equipment, manufacturers' advice and operating procedures • A food processing enterprise with documentation to support the implementation of a QA system • Methods and related software systems as required for collecting data and calculating yields, efficiencies and material variances appropriate to production environment • Tests used to report relevant product/process information and recorded results.

Method of assessment	The following assessment methods are suggested: • Observation of candidate carrying out product development and conducting a range of tests and procedures • Written and/or oral questioning to assess knowledge and understanding • Completing workplace documentation • Third party reports from experienced practitioner • Case studies • Field Reports.
Guidance information for assessment	Evidence should be gathered over a period of time in a range of actual or simulated environments.

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.

Quality systems	These may include: • Australian and New Zealand Food Standards • Food and meat industry sector specific standards • International standards e.g. ISO 9000 series • Personal Qualities Assessment (PQA) • Enterprise specific requirements.
Requirements of the quality system	These may include: • Codes of practice, regulations, Safety Data Sheets (SDSs) • control of documents, data, quality records • coverage of contracts, purchasing, supply, processing • handling, storage, processing, packaging, preservation, storage and delivery of food products • definition of management responsibilities • design and process controls • inspecting and testing, control of non-conforming • product, preventative and corrective action, auditing • management of links and impacts on all systems within the enterprise • production identification and traceability • training.
Systems components and procedures	These may include: • correction e.g. disposition, corrective action, liability management, customer complaint resolution • prevention e.g. training, operator feedback, manuals, technology and equipment reliability and maintenance, statistical collection and information, supplier QA, Standard Operating Procedures (SOPs) and work instructions.
Statistical data analysis	This may include: • correlation and regression analysis, bi-variate and multivariate analysis • distribution theory • estimating and hypothesis testing

	• probability and statistical inference • process stability, capability and management • reliability planning • sampling • statistical process control requirements, charting applications • variations and variation monitoring.
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Quality tools	These may include cause and effect and fish bone diagrams, control charts, data points, flow charts, histograms, prioritisation matrices, process improvement models, process capability, pareto charts and team structures.
Data management systems	These may be manual or computerised and cover data collection, data monitoring and data analysis and interpretation.
Data analysis and interpretation	This may include: • Acceptable Quality Level (AQLs) • Chemical Lean (CL) levels • microbiological analysis, eg Total Viable Counts (TVC), e-coli counts • process capability analysis • process variation analysis • product monitoring • statistical process control • temperature eg cooling and chilling rates.
Documentation for the QA process for food safety	This may include: • amendment registers • Critical Control Points (CCPs) monitoring forms and additional monitoring requirements and supporting programs • CCP work instructions • HACCP audit table • HACCP team register, product description and use • process flow charts, factory floor plan, hazard analysis table • schedules relating to hygiene, cleaning and sanitation • procedures, work instructions, approved chemicals • calibration, pest control, training, product identification and recall.
Legislation	• Australian and international standards • Acts of Federal and State Parliament • State and territories' food regulations • International, Australian and State environmental protocols and regulations regarding effluent.
OHS requirements	• Codes of practice, regulations, safety data sheets (SDSs) • Enterprise and process specific OHS requirements.

Regulatory requirements	These may include: • animal welfare • commercial law including fair trading, trade practices • consumer law • corporate law, including registration, licensing, financial • reporting • environmental and waste management • equal opportunity, anti-discrimination and sexual harassment • Legislation • hygiene and sanitation requirements • industrial awards, agreements • relevant regulations • state regulations regarding food processing • taxation.
Process capability	This includes: • operational capability (resources, risks, opportunities, commitments) • technical capability (personnel, equipment, systems, suppliers).
Monitoring systems and strategies	These may include: • audits and reviews • feedback from stakeholders • inspection and testing procedures and regimes (including chemical and microbiological testing procedures) for validation and verification • statistical collection and analysis.
Third party certification	This includes: • regulatory agencies • accountabilities, inspection stamps/seals • customer requirements and specifications • importing country requirements • licensing or registration requirements • national or international quality endorsement • product description and certification.

Unit Sector(s)

Technical.