



Federal Democratic Republic of Ethiopia
OCCUPATIONAL STANDARD
CHEMICAL PRODUCTS PROCESSING
MANAGEMENT
NTQF Level V



*Ministry of Education
June 2013*

Introduction

Ethiopia has embarked on a process of reforming its TVET-System. Within the policies and strategies of the Ethiopian Government, technology transformation – by using international standards and international best practices as the basis, and, adopting, adapting and verifying them in the Ethiopian context – is a pivotal element. TVET is given an important role with regard to technology transfer. The new paradigm in the outcome-based TVET system is the orientation at the current and anticipated future demand of the economy and the labor market.

The Ethiopian Occupational Standards (EOS) are - a core element of the Ethiopian National TVET-Strategy and an important factor within the context of the National TVET-Qualification Framework (NTQF). They are national Ethiopian standards, which define the occupational requirements and expected outcome related to a specific occupation without taking TVET delivery into account.

This document details the mandatory format, sequencing, wording and layout for the Ethiopian Occupational Standard comprised of Units of Competence.

A Unit of Competence describes a distinct work activity. It is documented in a standard format that comprises:

- Reference to Industry Sector, Occupational title, NTQF level
- Unit code
- Unit title
- Unit descriptor
- Unit of Competence
- Elements and performance criteria
- Variables and Range statement
- Evidence guide

Together all the parts of a Unit of Competence guide the assessor in determining whether the candidate is competent.

The ensuing sections of this EOS document comprise a description of the respective occupation with all the key components of a Unit of Competence:

- a chart with an overview of all Units of Competence for the respective occupation (Unit of Competence Chart) including the Unit Codes and the Unit of Competence titles
- contents of each Unit of Competence (competence standard)
- occupational map providing the Technical and Vocational Education and Training (TVET) providers with information and important requirements to consider when designing training programs for this standards and for the individual, a career path

UNIT OF COMPETENCE CHART

Occupational Standard: Chemical Products Processing Management		
Occupational Code: IND COM		
<i>NTQF Level V</i>		
<p>IND COM5 01 0613 Implement and Monitor OHS</p>	<p>IND COM5 02 0613 Develop Workplace Policy and Procedures for Sustainability</p>	<p>IND COM5 03 0613 Determine and Improve Process Capability</p>
<p>IND COM5 04 0613 Manage Operational Plan</p>	<p>IND COM5 05 0613 Manage Digital Production Workflow</p>	<p>IND COM5 06 0613 Manage Personal Work Priorities and Professional Development</p>
<p>IND COM5 07 0613 Prepare Production Costing Estimates</p>	<p>IND COM5 08 0613 Develop a Sales Strategy</p>	<p>IND COM5 09 0613 Manage Quality Customer Service</p>
<p>IND COM5 10 0613 Develop and Manage Sustainable Environmental Practices</p>	<p>IND COM5 11 0613 Collect, Analyze and Present Workplace Data and Information</p>	<p>IND COM5 12 0613 Manage Budgets and Financial Plans</p>
<p>IND COM5 13 0613 Manage Risk</p>	<p>IND COM5 14 0613 Review and Analyze Production Trials and Specify Retrials</p>	<p>IND COM5 15 0613 Analyze the Design of Products and Tools</p>
<p>IND COM5 16 0613 Manage Project Quality</p>	<p>IND COM5 17 0613 Facilitate and Capitalize on Change and Innovation</p>	<p>IND COM5 18 0613 Establish and Conduct Business Relationships</p>
<p>IND COM5 19 0613 Manage Continuous Improvement Process (Kaizen)</p>		

NTQF Level V

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Implement and Monitor OHS
Unit Code	IND COM5 01 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to implement and monitor the organization's OHS policies, procedures and programs in the relevant work area to achieve and maintain OHS standards.

Element	Performance Criteria
1. Provide information about the organisation's OHS	<p>1.1 Relevant provisions of OHS legislation and codes of practice are accurately and clearly explained to the work group.</p> <p>1.2 Information on the organisation's OHS policies, procedures and programs is provided in a readily accessible manner and is accurately and clearly explained to the work group.</p> <p>1.3 Information about identified Types of hazards and the outcomes of risk identification and control procedures is regularly provided and is accurately and clearly explained to the work group.</p>
2. Implement and monitor OHS	<p>2.1 Organisational procedures for consultation over OHS issues are implemented and monitored to ensure that all members of the work group have the opportunity to contribute.</p> <p>2.2 Issues raised through consultation are dealt with and resolved promptly or referred to the appropriate personnel for resolution according to enterprise procedures for issue resolution.</p> <p>2.3 The outcomes of consultation over OHS issues are made known promptly to the work group.</p> <p>2.4 Existing and potential hazards in the work area are identified and reported so that risk assessment and control procedures can be applied.</p>
3. Implement and monitor risk control procedures	<p>3.1 Existing risk control measures are monitored and results reported regularly according to enterprise procedures.</p> <p>3.2 Inadequacies in existing risk control measures are identified according to the hierarchy of control and reported to designated personnel.</p> <p>3.3 Inadequacies in resource allocation for implementation of risk control measures are identified and reported to designated personnel.</p> <p>3.4 Work procedures to control risks are implemented and adherence to them by the work group is monitored according to enterprise procedures.</p>
4. Implement hazardous events procedures	<p>4.1 Enterprise procedures for dealing with hazardous events are implemented whenever necessary to ensure that prompt control action is taken.</p> <p>4.2 Hazardous events are investigated to identify their cause according to investigation procedures.</p>

	4.3 Control measures to prevent recurrence and minimise risks of hazardous events are implemented based on the hierarchy of control if within scope of responsibilities and competencies or alternatively referred to designated personnel for implementation.
5. Implement and monitor OHS training	5.1 OHS training needs are identified accurately specifying gaps between OHS competencies required and those held by work group members. 5.2 Arrangements are made for fulfilling identified OHS training needs in both on and off-the-job training programs in consultation with relevant parties.
6. Implement and monitor OHS recordkeeping procedures	6.1 OHS records for work area are accurately and legibly completed according to workplace requirements for OHS records and legal requirements for the maintenance of records of occupational injury and disease. 6.2 Aggregate information from the area's OHS records is used to identify hazards and monitor risk control procedures within work area according to organisational procedures and within scope of responsibilities.

Variable	Range
Types of hazards	May include: <ul style="list-style-type: none"> • Hazardous events include: <ul style="list-style-type: none"> ➢ accidents ➢ fire and emergencies such as chemical spills or bomb scares • Procedures for dealing with them include evacuation, chemical containment and first aid procedures
Scope	May include: <ul style="list-style-type: none"> • all relevant OHS legislation • general duty of care • requirements for the maintenance and confidentiality of records of occupational injury and disease • provision of information and training, • regulations and codes of practice relating to hazards present in work area • health and safety representatives and OHS committees, and issue resolution

Evidence Guide	
Critical Aspects of Competence	Assessment requires evidence that the candidate to: <ul style="list-style-type: none"> • effectively implement and monitor OHS systems within an organisation • Produce a portfolio that shows that all performance criteria have been met. This should include procedures, information distributed to workers, records of monitoring and checking procedures and equipment

	<ul style="list-style-type: none"> Evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> hierarchy of control (the preferred order of risk control measures: elimination, engineering controls, administrative controls, personal protective equipment) potential hazards of ALL equipment and materials used in the workplace significance of EEO principles and practices for OHS the importance of other management systems for OHS levels of literacy and communication levels of workforce teamwork, supervision and training information sources
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> OHS in relation to operating machinery such as safely switching off machinery before cleaning is started communication of ideas and information by using clear oral communication and written materials to raise awareness of OHS and responding to concerns raised by workers collecting, analysing and organising information by using aggregate OHS data from records to monitor procedures planning and organising activities by establishing OHS committees or working groups to manage risks teamwork when ensuring that all staff observe workplace OHS standards mathematical ideas and techniques by documenting hazardous events problem-solving skills by identifying potentially hazardous situations and resolving them and revising procedures use of technology by using a database application
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> Interview / Written Test Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Develop Workplace Policy and Procedures for Sustainability
Unit Code	IND COM5 02 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to develop and implement a workplace sustainability policy, including the modification of the policy to suit changed circumstances. This unit requires the ability to access industry information, applicable legislative and Occupational Health and Safety (OHS) guidelines.

Element	Performance Criteria		
1. Develop workplace sustainability policy	<p>1.1 Scope of sustainability policy is defined.</p> <p>1.2 Information is gathered from a range of sources to plan and develop policy.</p> <p>1.3 Stakeholders as a key component of the policy development process are identified and consulted.</p> <p>1.4 Appropriate strategies are included in policy at all stages of work for minimising resource use, reducing toxic material and hazardous chemical use, and employing life cycle management approaches.</p> <p>1.5 Recommendations are made for policy options based on likely effectiveness, timeframes and cost</p> <p>1.6 Policy are developed that reflects the organisation's commitment to sustainability as an integral part of business planning and as a business opportunity.</p> <p>1.7 Appropriate methods of implementation is agreed to.</p>		
2. Communicate workplace sustainability policy	<p>2.1 Workplace sustainability policy, including its expected outcome to key stakeholders are promoted.</p> <p>2.2 Those involved in implementing the policy as to outcomes expected, activities to be undertaken and responsibilities assigned are informed.</p>		
3. Implement workplace sustainability policy	<p>3.1 Procedures are developed and communicated to help implement workplace sustainability policy</p> <p>3.2 Strategies for continuous improvement in resource efficiency are implemented.</p> <p>3.3 Responsibility is established and assigned to use recording systems for tracking continuous improvements in sustainability approaches.</p>		
4. Review workplace sustainability policy implementation	<p>4.1 Document outcomes are documented and feedback is provided to key personnel and stakeholders.</p> <p>4.2 Successes or otherwise of policy are investigated.</p>		
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	<p>4.3 Records are monitored to identify trends that may require remedial action and use to promote continuous improvement of performance.</p> <p>4.4 Policy and or procedures as required are modified to ensure improvements are made.</p>
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Variable	Range
Scope	<p>May include:</p> <ul style="list-style-type: none"> • addressing sustainability initiatives through reference to standards, guidelines and approaches such as: <ul style="list-style-type: none"> ➤ ecological foot printing ➤ Energy Efficiency Opportunities Bill 2005I ➤ Global Reporting Initiative ➤ green office program ➤ green purchasing ➤ Greenhouse Challenge Plus ➤ ISO 14001:1996 Environmental management systems ➤ life cycle analyses ➤ life cycle analyses ➤ product stewardship ➤ supply chain management ➤ sustainability covenants/compacts ➤ triple bottom line reporting • integrated approach to sustainability which includes environmental, economic and social aspects, or a specific approach that focuses on each aspect individually • investigating particular business and market context of the industry/organisation • meeting relevant laws, by laws and regulations or best practice to support compliance in environmental performance and sustainability at each level as required (such as Environmental Protection or Biodiversity Conservation Act): <ul style="list-style-type: none"> ➤ international ➤ commonwealth ➤ state/territory ➤ industry ➤ organization • Parts of the organisation to which it is to apply, including whether it is for the whole organisation, one site, one work area or a combination of these.
Sources	<p>May include:</p> <ul style="list-style-type: none"> • regulatory sources • relevant personnel • Organisational specifications.
Stakeholders	<p>Individuals and groups both inside and outside the organisation who have some direct interest in the organisation's conduct, actions, products and services, including:</p> <ul style="list-style-type: none"> • customers

	<ul style="list-style-type: none"> • employees at all levels of the organization • government • other organizations • regulators • suppliers • Key personnel within the organisation and specialists outside the organisation who may have particular technical expertise.
Strategies	<p>May include:</p> <ul style="list-style-type: none"> • promotional activities • raising awareness among stakeholders • Training staff in sustainability principles and techniques.

Evidence Guide

Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • candidate's involvement as a key person in planning, developing and implementing organisational policy and that the developed policy complies with legislative requirements • implementation strategy, as part of the policy, that has been devised, implemented and reviewed showing a measurable improvement utilising the chosen benchmark indicators • communicating with stakeholders to discuss possible approaches to policy development and implementation, and contributing to the resolution of disputes among stakeholders • developing and monitoring policies for analysing data on enterprise resource consumption • using software systems for recording and filing documentation for measurement of current usage and using word processing and other basic software for interpreting charts, flowcharts, graphs and other visual data and information • Reviewing and improving policies by identifying improvements and benchmarking against industry best practice and attempting new approaches continuously over time.
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of -</p> <ul style="list-style-type: none"> • best practice approaches relevant to own work area • environmental or sustainability legislation, regulations and codes of practice applicable to industry and organisation • equal employment opportunity, equity and diversity principles and occupational health and safety implications of policy being developed • policy development processes and practices • principles, practices and available tools and techniques of sustainability management relevant to the particular industry context • quality assurance systems relevant to own organisation • relevant industry competency • relevant organisational policies, procedures and protocols

	<ul style="list-style-type: none"> • relevant systems and procedures to aid in the achievement of workplace sustainability
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • communication skills to adjust communication to suit different audiences; to respond effectively to diversity; to work as a member of a team to consult on and validate policy • literacy skills to read and evaluate complex and formal documents such as policy and legislation • problem skills to effectively manage different points of view and dissenting stakeholders • research, analytical and writing skills to research, analyse and present information; to prepare written reports requiring precision of expression and language and structures suited to the intended audience
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Determine and Improve Process Capability
Unit Code	IND COM5 03 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to process capability, which is a statistical concept that allows a practitioner to assess required performance against the actual (as distinct from design) capability of the process.

Element	Performance Criteria
1. Obtain data for process capability study	1.1 The process requiring capability analysis is identified. 1.2 Process capability data is obtained.
2. Analyse data	2.1 Causes of systematic variation in liaison with relevant personnel are identified. 2.2 Solutions are developed to eliminate/minimise systematic variation in liaison with relevant people.
3. Take action to improve process capability	3.1 Plans to implement solutions are developed. 3.2 Relevant people is liaised with to implement solutions. 3.3 Necessary approvals as required are gained. 3.4 Implementation is monitored and adjustments as required are made. 3.5 New/revised process capability is determined. 3.6 Revised process capability regime is implemented.

Variable	Range
Process	Capability of data collecting

Evidence Guide	
Critical Aspects of Competence	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> The manager should be able to implement and review a process capability system and make improvements to the process using process capability as a tool. Evidence should be available of the conducting of process capability studies, the improvement to process capability as a result of these studies and the implementation of a revised process capability regime One complex project or several simpler projects will be needed to gain sufficient evidence.
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: <ul style="list-style-type: none"> mathematical statistical methods communication

	<ul style="list-style-type: none"> • negotiation • planning • analysis • problem solving • teamwork • data collection methods • variability and normal distribution • three sigma or six sigma processes as relevant • random and non-random results - recognition of assignable causes • causes of different types of non-random results • causes of random variation • process understanding sufficient to translate the data into variations in the process and determine methods of controlling them
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • problem solving • computer operation • data processing techniques
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Manage Operational Plan
Unit Code	IND COM5 04 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to develop and monitor implementation of the operational plan to provide efficient and effective workplace practices within the organization's productivity and profitability plans. Management at a strategic level requires systems and procedures to be developed and implemented to facilitate the organization's operational plan.

Element	Performance Criteria
1. Develop operational plan	<p>1.1 Resource requirements are researched, analysed and documented and an operational plan in consultation with relevant personnel, colleagues and specialist resource managers are developed.</p> <p>1.2 Consultation processes as an integral part of the operational planning process are developed and/or implemented.</p> <p>1.3 Details of the operational plan include the development of key performance indicators to measure organisational performance is ensured.</p> <p>1.4 Contingency plans are developed and implemented at appropriate stages of operational planning.</p> <p>1.5 The development and presentation of proposals for resource requirements is supported by a variety of information sources is ensured and specialist advice as required is sought.</p> <p>1.6 Approval for plan from relevant parties is obtained and understanding among work teams involved is ensured.</p>
2. Plan and manage resource acquisition	<p>2.1 Develop and implement strategies to ensure that employees are recruited and/or inducted within the organisation's human resources management policies and practices</p> <p>2.2 Develop and implement strategies to ensure that physical resources and services are acquired in accordance with the organisation's policies, practices and procedures</p>
3. Monitor and review operational performance	<p>3.1 Performance systems and processes are developed, monitored and reviewed to assess progress in achieving profit and productivity plans and targets</p> <p>3.2 Budget and actual financial information are analysed and interpreted to monitor and review profit and productivity performance</p>

	<p>3.3 Identify areas of underperformance are identified, solutions are recommended, and prompt action is taken to rectify the situation.</p> <p>3.4 Systems are planned and implemented to ensure that mentoring and coaching are provided to support individuals and teams to effectively, economically and safely use resources.</p> <p>3.5 Recommendations are negotiated for variations to operational plans and gain approval from designated persons/groups.</p> <p>3.6 Systems are developed and implemented to ensure that procedures and records associated with documenting performance are managed in accordance with organisational requirements.</p>
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Variable	Range
Resource requirements	<p>May include:</p> <ul style="list-style-type: none"> • goods and services to be purchased and ordered • human, physical and financial resources - both current and projected • stock requirements and requisitions
Operational plans	<p>May also be termed:</p> <ul style="list-style-type: none"> • action plans • annual plans • management plans • tactical plans
Consultation processes	<p>May refer to:</p> <ul style="list-style-type: none"> • email/intranet communications, newsletters or other processes and devices which ensure that all employees have the opportunity to contribute to team and individual operational plans • mechanisms used to provide feedback to the work team in relation to outcomes of consultation • meetings, interviews, brainstorming sessions
Relevant personnel, colleagues and specialist resource managers	<p>May include:</p> <ul style="list-style-type: none"> • employees at the same level or more senior managers • managers • occupational health and safety committee/s and other people with specialist responsibilities • supervisors • union or employee representatives
Key performance indicators	<p>May refer to:</p> <ul style="list-style-type: none"> • measures for monitoring or evaluating the efficiency or effectiveness of a system which may be used to demonstrate accountability and to identify areas for improvements

Contingency plans may include:	<ul style="list-style-type: none"> • contracting out or outsourcing human resources and other functions or tasks • diversification of outcomes • finding cheaper or lower quality raw materials and consumables • increasing sales or production • recycling and re-using • rental, hire purchase or alternative means of procurement of required materials, equipment and stock • restructuring of organisation to reduce labour costs • risk identification, assessment and management processes • seeking further funding • strategies for reducing costs, wastage, stock or consumables • succession planning
Organization's policies, practices and procedures may include:	<ul style="list-style-type: none"> • organisational culture • organisational guidelines which govern and prescribe operational functions, such as the acquisition and management of human and physical resources • Standard Operating Procedures • undocumented practices in line with organisational operations
Designated persons/groups	<p>May include:</p> <ul style="list-style-type: none"> • groups designated in workplace policies and procedures • managers or supervisors whose roles and responsibilities include decision making on operations • other stakeholders such as Board members • other work groups or teams whose work will be affected by recommendations for variations

Evidence Guide

Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • development of an operational plan with details of how it will be implemented and monitored • Knowledge of models and methods for operational plans.
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of -</p> <ul style="list-style-type: none"> • models and methods for operational plans • budgeting processes • Alternative approaches to improving resource usage and eliminating resource inefficiencies and waste.
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • literacy skills to access and use workplace information and to write a succinct and practical plan • technology skills to use software to produce and monitor the plan against performance indicators • planning and organizational skills • coaching skills to work with people with poor performance • numeracy skills to allocate and manage financial resources

Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Manage Digital Production Workflow
Unit Code	IND COM5 05 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to manage the digital workflow from concept stage to completion and delivery. It focuses on the management of a digital workflow that could include customer service, job generation, printing, finishing and dispatch.

Element	Performance Criteria
1. Plan a production workflow for a digital print product	<p>1.1 The stages of the production workflow are identified to determine sequencing.</p> <p>1.2 Workflow is sequenced to obtain optimum production efficiency and job quality.</p> <p>1.3 New sequences that are required for non-standard jobs are tested.</p> <p>1.4 Workflow is optimised for continued improvement .</p>
2. Manage resources and time	<p>2.1 Resources relevant to digital production are identified, evaluated and incorporated to achieve the required outcome.</p> <p>2.2 Time management is integrated into project planning and monitoring.</p> <p>2.3 Human resources are incorporated and supported within the project framework to achieve the required outcome.</p> <p>2.4 Teamwork elements are identified and developed to achieve the required outcome.</p>
3. Determine and manage budgets	<p>3.1 Estimation of costs are identified and applied to a range of digital products.</p> <p>3.2 Budget plans are established and checked against estimations to deliver accurate costing.</p> <p>3.3 Estimating practices and pricing models are determined and implemented to deliver the required outcome within designated timeframes and costs.</p> <p>3.4 Job costs are determined, documented and monitored continuously to comply with business commitments and legal obligations.</p> <p>3.5 Business transactions are undertaken ethically and according to law.</p> <p>3.6 Workplace budget estimates and expenditure are reviewed and documented to assist in future business dealings.</p>

Variable	Range
Production workflow	May include: <ul style="list-style-type: none"> • customer service • job generation • printing • finishing • Dispatch.
Job quality	May include: <ul style="list-style-type: none"> • client specifications/requirements • enterprise standards • Industry standards.
Resources	May include: <ul style="list-style-type: none"> • employees • printing and finishing equipment • digital devices, such as computers, printers, proofers and scanners • high-end layout and graphic software applications • Raster Image Processors (RIPs) and front-end processors.
Estimation	May include: <ul style="list-style-type: none"> • substrate cost is defined • machine rate is calculated • overhead costs calculated • energy and labour cost compares

Evidence Guide	
Critical Aspects of Competence	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> • manage and continually improve a digital production workflow • accurately manage a budget • procedures used to make improvements that affect quality Standards • job requirements for a specific production processes • planning and organising skills for determining the most effective production processes • collecting, analysing and organizing skills for reviewing the production schedule and evaluating its effective • OHS concerns that need to be considered when planning productions.
Underpinning Knowledge and Attitudes	Demonstrates knowledge of : <ul style="list-style-type: none"> • methods used to identify special production requirements and possible problems • criteria used to determine the availability of machines, materials and labour • common causes of failure in each production area that need to be monitored • procedures that can be implemented to minimise the effects of these

	<ul style="list-style-type: none"> • techniques used to monitor production schedules • criteria used for revising production schedules to take into account customer requirements and job complexity • information that needs to be monitored so as to maintain standards • individuals involved in monitoring quality standards • importance of team participation • reason for determining the skill level of workers • how the skill levels of individual workers are determined • costing/estimating methods • factors that might be adjusted in estimations if they consistently do not match costs • importance of keeping accurate production records • how often to review production records and actual costs • computerized production monitoring systems used to accurately assess costs
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • switching off machinery before cleaning is started • communication skills for expressing ideas and information by documenting recommendations to optimise the digital production process • teamwork skills for working with colleagues over changes to production • numeracy skills for managing budgets • problem-solving skills for finding solutions to production problems • technical skills for evaluating machine operations and making changes to improve the production process
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Manage Personal Work Priorities and Professional Development
Unit Code	IND COM5 06 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to manage own performance and professional development. Particular emphasis is on setting and meeting priorities, analyzing information and using a range of strategies to develop further competence.

Element	Performance Criteria
1. Establish personal work goals	<p>1.1 A positive role model in the workplace through personal work planning and organisation is served.</p> <p>1.2 Personal work goals, plans and activities reflect the organisation's plans, and own responsibilities and accountabilities are ensured.</p> <p>1.3 Personal performance in varying work conditions, work contexts and contingencies are measured and maintained.</p>
2. Set and meet own work priorities	<p>2.1 Initiative is taken to prioritise and facilitate competing demands to achieve personal, team and organisational goals and objectives.</p> <p>2.2 Technology is used efficiently and effectively to manage work priorities and commitments.</p> <p>2.3 Appropriate work-life balance is maintained, and ensure stress is effectively managed and health is attended to.</p>
3. Develop and maintain professional competence	<p>3.1 Personal knowledge and skills against competency standards are assessed to determine development needs, priorities and plans.</p> <p>3.2 Feedback from employees, clients and colleagues are sought and this feedback is used to identify and develop ways to improve competence.</p> <p>3.3 Development opportunities suitable to personal learning style/s to develop competence are identified, evaluated, selected and used.</p> <p>3.4 Participation in networks are undertaken to enhance personal knowledge, skills and work relationships.</p> <p>3.5 New skills are identified and developed to achieve and maintain a competitive edge.</p>

Variable	Range
Own responsibilities and accountabilities	<p>May include:</p> <ul style="list-style-type: none"> expectations of workplace performance as expressed in a performance plan outputs as expressed in position descriptions or duty statements

	<ul style="list-style-type: none"> • statement of conduct outlining an individual's responsibilities/actions/performance
Technology	<p>May include:</p> <ul style="list-style-type: none"> • computerised systems and software, databases, project management and word processing • electronic diary • Personal Digital Assistant (PDA)
Competency standards	<p>May include:</p> <ul style="list-style-type: none"> • enterprise-specific units of competency consistent with work requirements • nationally endorsed units of competency consistent with work requirements
Clients and colleagues	<p>May include:</p> <ul style="list-style-type: none"> • colleagues at the same level and more senior managers • internal or external customers • people from a wide range of social, cultural and ethnic backgrounds and with a range of physical and mental abilities • team members
Development opportunities	<p>May include:</p> <ul style="list-style-type: none"> • action learning • coaching • exchange/rotation • induction • mentoring • shadowing and structured training programs

Evidence Guide

Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • systems and processes (electronic or paper-based) used to organise and prioritise tasks, which show how work is managed • personal development plan, with career objectives and an action plan
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • principles and techniques involved in the management and organisation of: <ul style="list-style-type: none"> ➢ performance measurement ➢ personal behavior, self-awareness and personality traits identification ➢ personal development plan ➢ personal goal setting ➢ time management • management development opportunities and options for self • organisation's policies, plans and procedures • types of learning style/s and how they relate to the individual • types of work methods and practices that can improve personal performance

Underpinning Skills	Demonstrates skills in: <ul style="list-style-type: none"> • communication skills to receive, analyse and report on feedback • literacy skills to interpret written and verbal information about workplace requirements • Organizational skills to set and achieve priorities.
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Prepare Production Costing Estimates
Unit Code	IND COM5 07 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to cost and estimate production processes.

Element	Performance Criteria
1. Identify costing estimate requirements	1.1 Labour hours, times and other statistics required are identified and applied in calculations. 1.2 Available machine hours are identified and applied in calculations. 1.3 Economic batch sizes are identified. 1.4 Material requirements are identified and applied in calculations.
2. Prepare costing estimates	2.1 Type and scope of costing estimates are calculated using material, labour and machine costs. 2.2 Cost estimate details are calculated.
3. Compare estimates with actual costs	3.1 Actual costs are compared with estimates. 3.2 Costing basis is adjusted as appropriate.

Variable	Range
Type and scope of costing may include:	<ul style="list-style-type: none"> This unit applies to managers/supervisors responsible for quality in an enterprise or large production section Estimates are based on familiar processes using available standard cost item statistics

Evidence Guide	
Critical Aspects of Competence	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> accurately estimating and costing production for valid and reliable assessment of this unit, evidence should be gathered over a period of time through a range of methods for assessment to indicate consistent performance Evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: <ul style="list-style-type: none"> OHS and other statutory requirements legal requirements that affect the costing of your operations printing processes and operations information that you require from a client before costing/estimating can be done minimising production costs on any given job relationships between the processes you are involved in and prior and subsequent operations done to the job set up and changeover times determined for your processes

	<ul style="list-style-type: none"> • printing materials • materials that need to be included in the costing/estimating process • alternative materials that may determined suitable for a client • alternative materials or processes suggested to a client • references and resources about materials and suppliers that do you need to help in costing/estimating • different costing/estimating methodologies • particular costing/estimating method choice • other methods that are there, and when might you use them • factors that you might adjust in your estimations if they consistently do not match costs • sampling and quality control techniques • quality checks that are necessary on outsourced materials or other inputs • effects that quality control have on costing • production records • accurate production records keeping • review production records and actual costs • computerized production monitoring systems that can be used to accurately assess costs 		
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • OHS in relation to operating machinery such as safely switching off machinery before cleaning is started • communication of ideas and information by consulting with customers and staff to identify problems and issues • collecting, analysing and organising information by accessing data about customer needs, machine and worker capabilities, capital cost bases; use of data from production control systems • planning and organising activities by determining required cost estimate details prior to printing estimates • teamwork when obtaining feedback from production workers to verify estimates against actual costs • mathematical ideas and techniques by developing of costing models that take all relevant factors into consideration • problem-solving skills by adjusting the basis for costing as determined by the discrepancy between estimated and actual costing • use of technology by using tools to assist with calculations 		
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.		
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning 		
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.		
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Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Develop a Sales Strategy
Unit Code	IND COM5 08 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to develop a sales strategy to underpin the attainment of targets within a marketing plan.

Element	Performance Criteria
1. Review existing sales strategy.	1.1 Current sales strategy for all products and services are reviewed. 1.2 Current sales strategies for products and services are compared and contrasted. 1.3 Joint business sales strategies are identified.
2. Devise a sales strategy	2.1 Efficient decision making on sales planning through securing relevant information is enhanced. 2.2 Appropriate tools are used to complete sales planning and analysis activities for a specific market. 2.3 Sales targets are devised. 2.4 Sales targets through involvement of relevant people using latest data are reviewed and set.
3. Implement sales strategy.	3.1 Ensure sales targets underpin business goals and outcomes . 3.2 Ensure sales strategies support marketing and promotional plans.

Variable	Range
Sales strategy	May include: <ul style="list-style-type: none"> • promotional activities • sales techniques • territory management • rapport building • product knowledge • administration procedures and requirements • time management • Negotiation skills. • product or service • merchandising and sales strategy • discount periods, e.g. annual sale • promotional strategies and their duration, cycle, territory coverage and product or service focus
Products and services	May be grouped by: <ul style="list-style-type: none"> • brand

	<ul style="list-style-type: none"> • merchandise classification • category • range • Customer.
Joint business sales strategies	<p>Will vary based on:</p> <ul style="list-style-type: none"> • product, range, line, or category performance requirements • Objectives such as those for price, profit, brand share, market share.
Relevant information	<p>May include:</p> <ul style="list-style-type: none"> • current performance data • sales and contracts • forecasted trends and opportunities • Available resource commitments and capacity.
Planning and analysis	<p>Activities for a specific market may include consideration of:</p> <ul style="list-style-type: none"> • location • product and service mix • packaging or presentation • quality factors (time, cost, variations) • access • Continuity.
Relevant people	<p>May include:</p> <ul style="list-style-type: none"> • internal or external consultants • employees • supervisors • Relevant managers.
Business goals and outcomes	<p>May include:</p> <ul style="list-style-type: none"> • key performance indicators • strategic objectives • price • market and sales indicators • brand value • quality standards and criteria • performance benchmarks • Milestones.

Evidence Guide

Critical Aspects of Competence	<p>Assessment requires evidence that the candidate to:</p> <ul style="list-style-type: none"> • access, analyse and integrate information regarding current company sales strategies • develop realistic sales strategy targets that relate to strategic and business planning targets • develop a successful sales strategy for a product or service in consultation with relevant personnel • establish procedures and mechanisms to collect and report on sales strategy during the development stage • Present concise implementation procedures and review mechanisms for a sales strategy
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Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • business policy and procedures in regard to: <ul style="list-style-type: none"> ➤ strategic planning ➤ sales and service delivery • principles and techniques in interpersonal communication • business merchandise and service range • existing sales plans • joint promotional programs • business and direct customer requirements • information sources and their reliability and accuracy • marketing and promotional planning targets • OHS aspects of job • Relevant commercial law and legislation
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • analyzing, implementing and evaluating sales strategies • interpersonal communication skills to: <ul style="list-style-type: none"> ➤ present reports and present to groups and consult through clear and direct communication ➤ ask questions to identify and confirm requirements ➤ share information ➤ give instructions ➤ use language and concepts appropriate to cultural differences ➤ use and interpret non-verbal communication • literacy skills in regard to: <ul style="list-style-type: none"> ➤ documenting strategic plans ➤ accessing, reading and interpreting information • numeracy skills in regard to: <ul style="list-style-type: none"> ➤ interpret and maintain data ➤ Set territory sales targets that link to sales, marketing and strategic plans
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Manage Quality Customer Service
Unit Code	IND COM5 09 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to develop strategies to manage organizational systems that ensure products and services are delivered and maintained to standards agreed by the organization. Operators may have staff involved in delivering customer service and are responsible for the quality of their work. In many instances the work will occur within the organization's policies and procedures framework. At this level, the exercise of considerable discretion and judgment, using a range of problem solving and decision making strategies, will be required.

Element	Performance Criteria
1. Plan to meet internal and external customer requirements	<p>1.1 The needs of customers in planning processes are investigated, identified, assessed and included.</p> <p>1.2 Plans achieve the quality, time and cost specifications agreed with customers are ensured.</p>
2. Ensure delivery of quality products and services	<p>2.1 Products and services are delivered to customer specifications within organization's business plan.</p> <p>2.2 Team performance is monitored to consistently meet the organization's quality and delivery standards.</p> <p>2.3 Colleagues are assisted to overcome difficulty in meeting customer service standards.</p>
3. Monitor, adjust and review customer service	<p>3.1 Strategies are developed and used to monitor progress in achieving product and/or service targets and standards.</p> <p>3.2 Strategies are developed and used to obtain customer feedback to improve the provision of products and services.</p> <p>3.3 Resources are developed, procured and used effectively to provide quality products and services to customers.</p> <p>3.4 Decisions are made to overcome problems and to adapt customer services, products and service delivery in consultation with appropriate individuals and groups</p> <p>3.5 Records, reports and recommendations within the organization's systems and processes are managed.</p>

Variable	Range
Customers	May be: <ul style="list-style-type: none"> • Board members • clients, purchasers of services

	<ul style="list-style-type: none"> • co-workers, peers and fellow frontline managers • members of the general public who make contact with the organisation, such as prospective purchasers of services • potential funding bodies • supervisors • Suppliers of goods and services and contractors providing goods and services.
Quality	May refer to characteristics of a product, system, service or process that meet the requirements of customers and interested parties.
Products and services	May include: <ul style="list-style-type: none"> • either products or services • goods • ideas • infrastructure and private or public sets of benefits.
Strategies	May refer to: <ul style="list-style-type: none"> • databases and other controls to record and compare data over time • electronic feedback mechanisms using intranet, internet and email • feedback forms and other devices to enable communication from customers • long-term or short-term plans for monitoring achievement and evaluating effectiveness • policies and procedures • questionnaires, survey and interviews • Training and development activities.
Resources	May include: <ul style="list-style-type: none"> • buildings/facilities • equipment • finance • information, people, power/energy, technology and time.

Evidence Guide

Critical Aspects of Competence	Assessment requires evidence that the candidate: <ul style="list-style-type: none"> • plans, policies or procedures for delivering quality customer service • demonstrated techniques in solving complex customer complaints and system problems that lead to poor customer service • Knowledge of techniques for solving complaints.
Underpinning Knowledge and Attitudes	Demonstrates knowledge of: <ul style="list-style-type: none"> • key provisions of relevant legislation from all levels of government that may affect aspects of business operations, such as: <ul style="list-style-type: none"> ➤ anti-discrimination legislation, Ethiopian consumer law, ethical principles, codes of practice, privacy laws, financial legislation and OHS

	<ul style="list-style-type: none"> • organizational policy and procedures for customer service including handling customer complaints • service standards and best practice models • public relations and product promotion • techniques for dealing with customers, including customers with specific needs • techniques for solving complaints including the principles and techniques involved in the management and organization of: <ul style="list-style-type: none"> ➤ customer behavior ➤ customer needs research ➤ customer relations ➤ ongoing product and/or service quality ➤ problem identification and resolution ➤ quality customer service delivery ➤ record keeping and management methods ➤ strategies for monitoring, managing and introducing ways to improve customer service relationships • strategies to obtain customer feedback
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • analytical skills to identify trends and positions of products and services • communication skills to: <ul style="list-style-type: none"> ➤ coach and mentor staff and colleagues ➤ monitor and advise on customer service strategies • literacy skills to: <ul style="list-style-type: none"> ➤ edit and proofread texts to ensure clarity of meaning and accuracy of grammar and punctuation ➤ prepare general information and papers according to target audience ➤ read and understand a variety of texts • problem solving skills to: <ul style="list-style-type: none"> ➤ deal with customer enquiries or complaints ➤ deal with complex and non-routine difficulties • technology skills to select and use technology appropriate to a task • self-management skills to: <ul style="list-style-type: none"> ➤ comply with policies and procedures ➤ consistently evaluate and monitor own performance ➤ seek learning opportunities.
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Develop and Manage Sustainable Environmental Practices
Unit Code	IND COM5 10 0613
Unit Descriptor	This unit covers the knowledge and skills needed to identify opportunities for and make improvements in sustainable environmental practices in production, maintenance and logistics. Areas covered include efficient use of raw materials, management of waste, electricity conservation, heat conservation and management, water management, environment protection and environment obligations of enterprises.

Element	Performance Criteria
1. Analyse resource use	1.1 All resource consuming processes are identified. 1.2 Quantity and nature of resource consumed are determined. 1.3 Resource flows through different parts of the process are analysed.
2. Develop resource conservation plans	2.1 The efficiency of use/conversion of resources is determined. 2.2 Causes of low efficiency of use waste management are determined. 2.3 Plans for increasing the efficiency of resource use are developed. 2.4 Resource use plans comply with regulations/licensing requirements are checked. 2.5 Benefit/cost of plans for necessary waste and unnecessary waste are determined.
3. Investigate alternative sources of resource	3.1 The function of the resource used is determined. 3.2 A specification for function is developed. 3.3 A range of sources for meeting that function is identified. 3.4 Benefit/cost for alternative resource sources are determined.
4. Develop plans for more efficient resource use	4.1 Benefit/costs for different alternatives developed are compared. 4.2 Proposals based on benefit/cost compare to limited resources are ranked. 4.3 Proposals meet regulatory requirements are checked. 4.4 Proposals for improving resource efficiency are recommended.
5. Implement selected plans	5.1 Relevant people are liaised with to implement resource efficiency plans. 5.2 To ensure implementation occurs is followed through.

	<p>5.3 Implementation is monitored and adjustments made as required.</p> <p>5.4 Check new resource usage to ensure improvements have occurred.</p>
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Variable	Range
Resources	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • all raw materials and components as well as cooling water, • process water, • cleaning water, • fuels, • lubricants and other materials used in/required by the process
Waste	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Waste (also known as muda in the Toyota Production System and its derivatives) is any activity which does not contribute to customer benefit/features in the product. • Within manufacturing, categories of waste include: <ul style="list-style-type: none"> ➢ excess production and early production ➢ delays ➢ movement and transport ➢ poor process design ➢ inventory ➢ inefficient performance of a process ➢ Making defective items. ➢ Waste for this unit may include activities which do not yield any benefit to the organization or any benefit to the organizations customers.
Necessary waste	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Necessary waste is any activity or cost which does not contribute directly to customer benefit/feature in the product, and which cannot be avoided (e.g. regulatory compliance and fixed costs). Necessary waste cannot be eliminated but should be managed.
Unnecessary waste	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Unnecessary waste is any activity or cost which does not contribute directly to customer benefit/features in the product and can be avoided. Unnecessary waste should be eliminated as quickly as practical.

Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • methods of analysing resource efficiency for different resources • principles of resource efficiency • problem solving • the '3Rs' – reduce, re-use, recycle

Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • regulatory/licensing requirements • types and sources of resources • alternative resources/alternative ways of achieving the same function • principles of resource efficiency • relevant regulatory/legislative requirements • process needs for resources
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • analysis • mathematics • communication • problem solving • Data gathering. • planning and organizing
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Collect, Analyze And Present Workplace Data and Information
Unit Code	IND COM5 11 0613
Unit Descriptor	This unit involves the skills and knowledge required to collect, analyze and present workplace data and information including identifying required information, analyzing and preparing information for use, explaining information, and presenting workplace information to others.

Element	Performance Criteria
1. Identify required information	1.1 Purpose of the information/ data collection is identified. 1.2 Sources of information are established. 1.3 Appropriate information is collected.
2. Prepare information for use	2.1 Information is collated and analyzed in accordance with workplace procedures . 2.2 Processed information is organized and presented in a logical manner Depending on workplace context . 2.3 Checks for accuracy are made.
3. Explain information	3.1 Data collection and analysis is explained to customers in a way that effectively contributes to the workplace operations. 3.2 Outcomes of data/information analysis are presented to others using appropriate presentation modes and resources. 3.3 Questions are answered and appropriate clarifications are given.
4. Present workplace information	4.1 Processed information is forwarded to appropriate personnel in accordance with workplace procedures. 4.2 Processed information is collated and stored in accordance with workplace procedures, regulations and legislation .

Variable	Range
Data collection	May include: <ul style="list-style-type: none"> that required for workplace operations may occur by day or night and in a variety of work contexts
Workplace procedures	May include: <ul style="list-style-type: none"> company procedures enterprise procedures organizational procedures established procedures

Depending on workplace context	<p>May involve:</p> <ul style="list-style-type: none"> • managers • supervisors/team leaders • workplace personnel • clients • private and/or public sector security personnel • police • security consultants • visitors • contractors • official representatives • union representatives • industrial relations • OH&S specialists • other professional or technical staff
Customers	<p>May be:</p> <ul style="list-style-type: none"> • internal or external
Presentation	<p>May included but not limited to:</p> <ul style="list-style-type: none"> • phone • electronic data interchange • fax • email • internet • radio • overhead or computer controlled projector • plain or electronic white board • flip charts • microphone and amplifier • video player and monitor
Information	<p>May include:</p> <ul style="list-style-type: none"> • workplace procedures, checklists and instructions • operations manuals • induction documentation • competency standards and training materials • job specifications • manufacturers specifications • HAZCHEM and dangerous/hazardous goods codes • goods identification numbers and codes • manifests, bar codes, goods and container identification • manufacturers specifications • workplace policies • supplier and/or client instructions • material safety data sheets • relevant codes of practice including the national standards for manual handling and the industry safety code • legislation, regulations and related documentation

	<ul style="list-style-type: none"> • award, enterprise bargaining agreement, other industrial arrangements • standards and certification requirements • quality assurance procedures • emergency procedures
regulations and legislation	<p>May include:</p> <ul style="list-style-type: none"> • relevant regulations, standards and codes of practice, including the national standards for manual handling and industry safety codes • dangerous goods and freight regulations and codes • relevant Ethiopian and state/territory standards and certification requirements • relevant Ethiopian and state/territory OH&S legislation • equal employment legislation and related policies • environmental protection regulations

Evidence Guide

Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • competency in this unit must be relevant to and satisfy all of the requirements of the elements and performance criteria of this unit and include demonstration of applying: • the underpinning knowledge and skills • relevant legislation and workplace procedures • other relevant aspects of the range statement
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Relevant OH&S responsibilities • Sources of information and data and procedures for processing the information for workplace use • Protocols and procedures for the collection, analysis and presentation of workplace information and data using relevant technology • Presentation and communication techniques including an understanding of barriers to effective communication and how to overcome them • Basic principles of effective presentation and communication of information • Techniques for communicating effectively with a multilingual persons or persons with a limited ability to speak or understand English • Typical presentation and communication problems and appropriate action and solutions
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • Communicate effectively with others when collecting, analysing and presenting workplace data and information • Read and interpret instructions and procedures relevant to the collection, analysis and presentation of workplace data and information

	<ul style="list-style-type: none"> • Interpret and follow operational instructions and prioritise work • Complete documentation related to the collection, analysis and presentation of workplace data and information • Identify and use required communication and presentation technology • Work collaboratively with others when collecting, analysing and presenting workplace data and information • Adapt appropriately to cultural differences in the workplace, including modes of behavior and interactions with others • Promptly report and/or rectify any identified problems that may arise when collecting, analyzing and presenting workplace data and information in accordance with regulatory requirements and workplace procedures • Plan own work including predicting consequences and identifying improvements • Implement contingency plans for unanticipated situations that may arise when collecting, analyzing and presenting workplace data and information • Monitor work activities in terms of planned schedule • Modify activities depending on differing operational contingencies, risk situations and environments • Work systematically with required attention to detail • Operate and adapt to differences in equipment in accordance with standard operating procedures
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Manage Budgets and Financial Plans
Unit Code	IND COM5 12 0613
Unit Descriptor	This unit describes the performance outcomes, skills and knowledge required to undertake financial management within a work team in an organization. This includes planning and implementing financial management approaches, supporting team members whose role involves aspects of financial operations, monitoring and controlling finances, and reviewing and evaluating effectiveness of financial management processes in line with the financial objectives of the work team and the organization.

Element	Performance Criteria
1. Plan financial management approaches	<p>1.1 Budget/financial plans for the work team are accessed.</p> <p>1.2 Budget/financial plans with relevant personnel within the organisation are clarified to ensure that documented outcomes are achievable, accurate and comprehensible</p> <p>1.3 Any changes required to be made are negotiated to budget/financial plans with relevant personnel within the organisation.</p> <p>1.4 Contingency plans in the event that initial plans need to be varied are prepared.</p>
2. Implement financial management approaches	<p>2.1 Relevant details of the agreed budget/financial plans to team members are disseminated.</p> <p>2.2 Support is provided to ensure that team members can competently perform required roles associated with the management of finances.</p> <p>2.3 Resources and systems are determined and accessed to manage financial management processes within the work team.</p>
3. Monitor and control finances	<p>3.1 Processes are implemented to monitor actual expenditure and to control costs across the work team.</p> <p>3.2 Expenditure and costs on an agreed cyclical basis are monitored to identify cost variations and expenditure overruns.</p> <p>3.3 Contingency plans as required are implemented, monitored and modified to maintain financial objectives.</p> <p>3.4 Budget and expenditure are reported on in accordance with organisational protocols.</p>
4. Review and evaluate financial management processes	<p>4.1 Data and information on the effectiveness of financial management processes within the work team are collected and collated for analysis.</p>

	<p>4.2 Data and information on the effectiveness of financial management processes within the work team are analysed and any improvements to existing processes are identified, documented and recommended.</p> <p>4.3 Agreed improvements in line with financial objectives of the work team and the organisation are implemented and monitored.</p>
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Variable	Range
Budget/ financial plans	<p>May include:</p> <ul style="list-style-type: none"> • cash flow projections • long-term budgets/plans • operational plans • short-term budgets/plans • spreadsheet-based financial projections • targets or key performance indicators for production, productivity, wastage, sales, income and expenditure
Relevant personnel	<p>May include:</p> <ul style="list-style-type: none"> • financial managers, accountants or financial controllers • supervisors, other frontline managers
Contingency plans	<p>May include:</p> <ul style="list-style-type: none"> • contracting out or outsourcing human resources and other functions or tasks • diversification of outcomes • finding cheaper or lower quality raw materials and consumables • increasing sales or production • recycling and re-using • rental, hire purchase or alternative means of procurement of required materials, equipment and stock • restructuring of organisation to reduce labour costs • risk identification, assessment and management processes • seeking further funding • strategies for reducing costs, wastage, stock or consumables • succession planning
Support	<p>May include:</p> <ul style="list-style-type: none"> • access to specialist advice • documentation of procedures • help desk or identified experts within the organisation • information briefings or sessions • intranet-based information • training including mentoring, coaching and shadowing
Required roles	<p>May include:</p> <ul style="list-style-type: none"> • arranging for use of corporate credit cards • banking • debt collection

	<ul style="list-style-type: none"> • ensuring security, accuracy and currency of financial operations • invoicing clients, customers and consumers • maintaining journals, ledgers and other record keeping systems • maintaining petty cash system • purchasing and procurement • wages and salaries payments and record keeping
Resources and systems	<p>May include:</p> <ul style="list-style-type: none"> • hardware and software • human, physical or financial resources • record keeping systems (electronic and paper-based) • specialist advice or support
Processes	<p>May include reporting of:</p> <ul style="list-style-type: none"> • assets • consumables • equipment • expenditure • income • stock • wastage
Report	<p>May include:</p> <ul style="list-style-type: none"> • bank statements • credit card statements • financial reports • invoices and receipts • ledgers and journals • logs • petty cash records • spreadsheet-based records
Financial management processes	<p>May include:</p> <ul style="list-style-type: none"> • bank account records • cash flow data • contracts • credit card receipts • employee timesheets • files of paid purchase and service invoices • income and expenditure • insurance reports • invoices • job costing • petty cash receipts • quotations • taxation records • wages/salaries books

Evidence Guide	
Critical Aspects of Competence	<p>Assessment requires evidence that the candidate:</p> <ul style="list-style-type: none"> • financial skills required to work with and interpret budgets, ageing summaries, cash flow, petty cash, GST, and profit and loss statements • Knowledge of the record keeping requirements for the ATO and for auditing purposes.
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of -</p> <ul style="list-style-type: none"> • basic accounting principles • organisational requirements related to financial management • relevant legislation and current requirements of the Ethiopian Taxation Office, including GST • requirements for organisational record keeping and auditing • principles and techniques involved in: <ul style="list-style-type: none"> ➢ budgeting ➢ cash flows ➢ electronic spreadsheets ➢ GST ➢ ledgers and financial statements ➢ Profit and loss statements.
Underpinning Skills	<p>Demonstrates skills in:</p> <ul style="list-style-type: none"> • numeracy skills to read and understand a budget and to update a budget • Technology skills to use software associated with financial record keeping.
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Manage Risk
Unit Code	IND COM5 13 0613
Unit Descriptor	This unit covers the development, implementation and evaluation of a risk management plan for the organization. It incorporates an assessment of all potential risks facing the organization and the development of strategies and plans to mitigate all risk situations through elimination, isolation or protection. This competency applies to managers or OHS specialists who are developing or maintaining a risk management plan for their site or organization. It is probably best applied to health, safety and environment risks.

Elements	Performance Criteria
1. Develop risk management plan	<p>1.1 Strategic position and policy on risk management are analysed and interpreted.</p> <p>1.2 An audit is conducted to identify risk management context and potential areas of risk are ensured.</p> <p>1.3 Organizational capability is analysed to reduce/control the likelihood of both incidents and consequences.</p> <p>1.4 The risk register is evaluated to ensure it contains relevant information regarding sources of risk, scenarios for loss of control of the risk, possible consequences, risk controls and action.</p> <p>1.5 Risk management policies are reviewed.</p> <p>1.6 The requirement for training/education for all groups and individuals are evaluated.</p> <p>1.7 Access to external specialist assistance is identified.</p> <p>1.8 Procedures for ongoing identification of hazards, and assessment and control of risk are established.</p> <p>1.9 Stakeholders in the development of the plan are consulted.</p>
2. Implement risk management plan	<p>2.1 Stakeholders are consulted with, the ranking of risks and the classifications of levels of risk are reviewed.</p> <p>2.2 A monitor/review watch list risks classified as low/acceptable are placed on.</p> <p>2.3 Processes are implemented to eliminate wherever practicable risks that are unacceptable.</p> <p>2.4 Processes are implemented to mitigate/minimize risks that cannot be eliminated in accordance with the risk management plan and the hierarchy of control.</p> <p>2.5 Strategies for risk minimization is documented.</p>

3. Evaluate risk management plan	<p>3.1 Procedures are established to regularly review risk management activities.</p> <p>3.2 Stakeholders have input to the review are ensured.</p> <p>3.3 Activities that do not achieve their objective/ performance outcomes are examined to determine cause.</p> <p>3.4 Targets for improvement and update plan are identified.</p> <p>3.5 Evaluation of risk management as a key component of all projects/activities is established.</p>
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Variable	Range
Context	<p>May include:</p> <ul style="list-style-type: none"> • Persons and organizations engaged in assessing managers in this unit need to have appropriate qualifications and experience in risk management as well as workplace assessment. • Risk management is the systematic process that is directed towards identifying hazards, assessing the risk and developing controls to minimize the risk and monitor the effectiveness of the controls (and taking action as required). • Relevant groups and individuals refers to those personnel who have knowledge about the issue being dealt with and the expertise to assist the decision making process. • External specialist assistance refers to any group or individual in the community who has the expertise to assist the organization to deal with any event/incident which may occur.
Risks may include:	<ul style="list-style-type: none"> • injury or disease • environmental • product failure • damage to property/plant/equipment • professional incompetence • natural disasters and equipment/system failures
Procedures	<p>May include:</p> <ul style="list-style-type: none"> • All operations are performed in accordance with procedures. • Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards. • All operations to which this unit applies are subject to stringent health, safety and environment requirements, which may be imposed through relevant State or Federal legislation, and these must not be compromised at any time. Where there is an apparent conflict between Performance Criteria and HSE requirements, the HSE requirements take precedence.

Risk ranking	<p>May include:</p> <ul style="list-style-type: none"> • Is a highly subjective process of rating risks according to their severity and likelihood? Common ranking systems are based on matrices or monograms
Legislation	<p>May include:</p> <ul style="list-style-type: none"> • codes and national standards relevant to the workplace • award and organization agreements and relevant industrial instruments • relevant legislation from all levels of government that affects business operation, especially in regard to OHS, environmental issues and EEO • relevant industry codes of practice

Evidence Guide

Critical Aspects of Competence	<p>Demonstrates skills and knowledge in:</p> <ul style="list-style-type: none"> • It is essential that competence is demonstrated in the knowledge and skills defined in this unit. These may include the ability to: <ul style="list-style-type: none"> ➤ develop, implement and evaluate the development of plans to eliminate ➤ isolate or protect people (and/or equipment) in the event of the potential negative event occurring • The emphasis should be on the ability to avoid/eliminate critical incidents rather than on recovery from a disaster. • Consistent performance should be demonstrated. In particular look for: <ul style="list-style-type: none"> ➤ communication/consultation skills to ensure all relevant groups and individuals are briefed, consulted and have an opportunity to input ➤ negotiation skills to mediate, negotiate to obtain consensus between individuals/groups on the risk management plan and (where required and appropriate) categorisation of risks ➤ ability to relate to people from a range of social, cultural and ethnic backgrounds and physical and mental abilities ➤ ability to apply a systematic process to development and documentation of plan and implementation of actions • These aspects may be best assessed using a range of scenarios/case studies/what ifs as the stimulus with a walk through forming part of the response. These assessment activities should include a range of problems, including new, unusual and extreme situations that may have been generated from the past incident history of the workplace, incidents on similar plants around the world, <u>hazard</u> analysis activities (e.g. HAZOP) and similar sources.
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Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • This describes the essential skills and knowledge and their level required for this unit. • The person must demonstrate understanding of specialized knowledge with depth in some areas. Required knowledge is to be limited to that which is sufficient to perform particular risk management functions. <p>Competence includes the ability to apply and explain:</p> <ul style="list-style-type: none"> ➤ relevant legislation from all levels of government that effects business operation, especially in regard to OHS and environmental issues, EEO, industrial relations and anti-discrimination ➤ the legal implications of deeming identified risks as acceptable ➤ strategic, tactical and operational plans of the organisation ➤ legal requirements for operating the business relevant to the area of responsibility ➤ relevant awards and industrial agreements ➤ workplace standards for OHS and environmental management ➤ internal or external audit methods ➤ focus groups processes ➤ hazard analysis processes ➤ investigation reports ➤ review of data such as hazard and incident reports, maintenance records, production records
Underpinning Skills	<p>Demonstrates skills of:</p> <ul style="list-style-type: none"> • This unit requires the ability to communicate high level material using all modes of communication to all levels. • Writing is required to the level of writing reports, policies and procedures. • Numeracy interpret and manipulate technical data
Resources Implication	<p>Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.</p>
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	<p>Competence may be assessed in the work place or in a simulated work place setting.</p>

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Review and Analyze Production Trials and Specify Retrials
Unit Code	IND COM5 14 0613
Unit Descriptor	This competency covers the reviewing of trial results, analyzing and correcting trial outcomes, and specifying and carrying out retrial procedures. This competency applies to technicians who analyze and review production trials. The key factors are the understanding of the purpose of the trials, and the interpretation of the trial results compared to that purpose. It includes: new product trials, new process trials, new equipment trials, modifications to product trials, modifications to process trials and Modifications to equipment trials.

Elements	Performance Criteria
1. Review trial results	<p>1.1 Trial objectives as a basis for comparison prior to review of results are confirmed.</p> <p>1.2 Trial product quality results are reviewed and compared with trial objectives to identify variations.</p> <p>1.3 Trial production results are reviewed and compared with trial objectives to identify variations.</p> <p>1.4 Hazards that may exist during analyzing product are controlled or eliminated.</p> <p>1.5 Production process, noting key variables is reviewed and analyzed.</p>
2. Analyze and correct trial outcome	<p>2.1 Trial results are analyzed to establish priorities for the correction of parameters which are outside specifications.</p> <p>2.2 Problems within area of responsibility are solved.</p> <p>2.2 Changes are recommended to achieve product quality and production requirements.</p> <p>2.3 Changes in to procedures are made to achieve the required product quality and production requirements.</p> <p>2.4 Unserviceable tools and equipment are tagged, faults are identified and corrected it.</p>
3. Specify and carry out retrial procedures	<p>3.1 Retrial objectives and priorities to procedures are specified.</p> <p>3.2 Retrial variations are carried out to achieve the trial objectives to procedures.</p> <p>3.3 Trial results to procedures are recorded.</p>

Variable	Range
Hazards	May include: <ul style="list-style-type: none"> • Typical hazards include operating equipment
Variables	May include: <ul style="list-style-type: none"> • Key variables to be monitored include production data
Problems	May include: <ul style="list-style-type: none"> • Typical process and product problems may include: • new products or processes • new dies, moulds or tooling • modified equipment or components • Modified or new materials
Tools and equipment	May include: <ul style="list-style-type: none"> • procedures • product specifications • trial results and data • Data analysing and reporting tools (e.g. computer spreadsheets)
Procedures	May include: <ul style="list-style-type: none"> • All operations are performed in accordance with procedures. • Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards

Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge in: <ul style="list-style-type: none"> • It is essential that competence is demonstrated in the ability to apply an understanding of polymer materials and processing to the interpretation of trial results and making judgments about the trials in terms of the trial objectives • Consistent performance should be demonstrated. For example, look to see that the performance of at least one type of product or process trial on a typical machine has been correctly analyzed and that there is evidence that other types of analyses can also be set up, run and completed satisfactorily.
Underpinning Knowledge and Attitudes	Demonstrates knowledge and understanding of: <ul style="list-style-type: none"> • The materials, equipment and process sufficient to interpret trial results and specify appropriate retriial conditions. • Organization procedures and policies along with the ability to implement them within appropriate time constraints and in a manner relevant to the job. • Managing risks using the hierarchy of controls applied to the process. • Approved hazard control, safety procedures, the use of PPE in relation to handling materials, equipment operation and cleanup. • a basis for solving processing and material problems,

	<ul style="list-style-type: none"> • a thorough understanding of polymer materials and processing • calculate results from trial data • interpret trial results in terms of trial objectives • determine variations to trial procedures to overcome limitations found • interpret results in terms of product end use requirements • make recommendations for changes to materials, process and product based on trial results • trial objectives • preliminary product specifications (physical properties, size, weight, appearance) • production requirements (output, rejects, yield, practical operating window) • trial results • product quality results • production results • changes • product design and specifications • mould, die and/or tooling design and construction • material grade • machine configuration or specification • production specifications • processing parameters • retrial objectives • product quality • production requirements • variations • sample size • machine parameters • material grade changes • mould, die and/or tooling changes • Machine configurations. • Numeracy and literacy with the ability to interpret technical specifications and reports. Advanced numeracy allowing the calculation and interpretation of statistics, product formulae and process conditions is also required.
Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • Application of the knowledge of managing risks using the hierarchy of controls applied to the process. • Application of approved hazard control, safety procedures, the use of PPE in relation to handling materials, equipment operation and cleanup. • Interpret technical specifications and reports. Advanced numeracy allowing the calculation and interpretation of statistics, product formulae and process conditions is also required.

Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Analyze the Design of Products and Tools
Unit Code	IND COM5 15 0613
Unit Descriptor	This competency covers the impact of design/tool design on the product and process. And applies to technicians/technologists who work with designs/tools. The key factors are the identification of key features, their impact on the process/product and the recommendation of modifications to design/tools. It includes: describing components and functions using appropriate terminology, interpreting drawings, identifying design features and their impact on product and Making recommendations for improving/optimizing design.

Elements	Performance Criteria
1. Identify tool components and operating principles	1.1 The common types of tools and their advantages and limitations are identified. 1.2 Appropriate tool components and systems are chosen.
2. Interpret tool drawings	2.1 Tool type from drawing is identified. 2.2 Tool components from drawing are identified.
3. Identify tool and part features that affect product quality	3.1 Common product faults due to tool problems are recognized. 3.2 The cause of the faults is identified. 3.3 Modifications are recommended to tool or material to rectify.
4. Identify product features that affect tool design	4.1 Good and poor product design features in terms of ease of tool design and manufacture are recognized. 4.2 The critical product design features which affect the selection of an appropriate manufacturing technology are identified. 4.3 The critical product design features which affect tool design are identified.
5. Analyze tool design	5.1 The process for the design, manufacture and trial of tools are used. 5.2 Analysis and balancing tools as appropriate to examine optimum tool design are used. 5.3 Procedures for analyzing the design of products and tools are followed. 5.3 Possible improvements are suggested to tool or product design.

Variable	Range
Procedures	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • All operations are performed in accordance with procedures. • Procedures include all relevant workplace procedures, work instructions, temporary instructions and relevant industry and government codes and standards.

Evidence Guide	
Critical Aspects of Competence	<p>Must demonstrate:</p> <ul style="list-style-type: none"> • The ability to apply a thorough understanding of polymer materials, their additives and the rheological, heat and other effects of processing to the design of tools and components. This understanding of material and process interactions should also be able to be applied in the interpretation of technical specifications and drawings.
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge and understanding of:</p> <ul style="list-style-type: none"> • The materials, equipment and process sufficient to predict their interactions and their impacts on performance. • Organization procedures and policies along with the ability to implement them within appropriate time constraints and in a manner relevant to the job. • A basis for solving processing and material problems including: <ul style="list-style-type: none"> ➤ interpret technical drawings and specifications for tools ➤ function of tool components and systems ➤ function of clamping/mounting/ancillary systems ➤ tool operating principles and adjustments ➤ impact of product design on tooling design ➤ impact of tooling design on product ➤ impact of tool design and material properties on productivity ➤ the technical strengths and weaknesses of common processing and fabrication technologies and their relative suitability for classes of products ➤ the economic and market features of common processing and fabrication technologies and their impact on the selection of a technology for a product ➤ impact of polymer and polymer compound properties on tool performance and product ➤ material/tool interactions ➤ the impact of different tool designs on product and productivity ➤ the temperature effects on process and product ➤ distinguish between types of tool designs required for different product types ➤ Fine tune and balance (where appropriate) the tooling.

Underpinning Skills	<p>Demonstrates skills to:</p> <ul style="list-style-type: none"> • High levels of numeracy and literacy with the ability to interpret technical specifications and reports. Advanced numeracy allowing the calculation and interpretation of statistics, product formulae and process conditions is also required.
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Manage Project Quality
Unit Code	IND COM5 16 0613
Unit Descriptor	This unit specifies the outcomes required to manage quality within projects. It covers determining quality requirements, implementing quality assurance processes, and using review and evaluation to make quality improvements in current and future projects.

Elements	Performance Criteria
1. Determine quality requirements	<p>1.1 Quality objectives, standards and levels are determined, with input from stakeholders and guidance of a higher project authority, to establish the basis for quality outcomes and a quality management plan.</p> <p>1.2 Established quality management methods, techniques and tools are selected and used to determine preferred mix of quality, capability, cost and time.</p> <p>1.3 Quality criteria are identified, agreed with a higher project authority and communicated to stakeholders to ensure clarity of understanding and achievement of quality and overall project objectives.</p> <p>1.4 Agreed quality requirements are included in the project plan and implemented as basis for performance measurement.</p>
2. Implement quality assurance	<p>2.1 Results of project activities and product performance are measured and documented throughout the project life cycle to determine compliance with agreed quality standards.</p> <p>2.2 Causes of unsatisfactory results are identified, in consultation with the client, and appropriate actions are recommended to a higher project authority to enable continuous improvement in quality outcomes.</p> <p>2.3 Inspections of quality processes and quality control results are conducted to determine compliance of quality standards to overall quality objectives.</p> <p>2.4 A quality management system is maintained to enable effective recording and communication of quality issues and outcomes to a higher project authority and stakeholders.</p>
3. Implement project quality improvements	<p>3.1 Processes are reviewed and agreed changes implemented continually throughout the project life cycle to ensure continuous improvement to quality.</p> <p>3.2 Project outcomes are reviewed against performance criteria to determine the effectiveness of quality management processes and procedures.</p> <p>3.3 Lessons learned and recommended improvements are identified, documented and passed on to a higher project authority for application in future projects.</p>

Variable	Range
Quality objectives	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • requirements from the client and other stakeholders • requirements from a higher project authority • negotiated trade-offs between cost, schedule and performance • those quality aspects which may impact on customer satisfaction
Quality management plan	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • established processes • authorizations and responsibilities for quality control • quality assurance and continuous improvement
Quality management methods, techniques and tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • brainstorming • benchmarking • charting processes • ranking candidates • defining control • undertaking benefit/cost analysis • processes that limit and/or indicate variation • control charts • flowcharts • histograms • pareto charts, scatter gram and run charts
Quality control	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • monitoring conformance with specifications • recommending ways to eliminate causes of unsatisfactory performance of products or processes • monitoring of regular inspections by internal or external agents
Improvements	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • formal practices, such as total quality management or continuous improvement • improvement by less formal processes which enhance both the product quality and processes of the project, for example client surveys to determine client satisfaction with project team performance

Evidence Guide

Critical Aspects of Competence	<p>Demonstrates skills and knowledge in:</p> <ul style="list-style-type: none"> • lists of quality objectives, standards, levels and measurement criteria • records of inspections, recommended rectification actions and quality outcomes • management of quality management system and quality management plans
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	<ul style="list-style-type: none"> • application of quality control, quality assurance and continuous improvement processes • records of quality reviews • lists of lessons learned and recommended improvements • how quality requirements and outcomes were determined for projects • how quality tools were selected for use in projects • how team members were managed throughout projects with respect to quality within the project • how quality was managed throughout projects • how problems and issues with respect to quality and arising during projects were identified and addressed • how projects were reviewed with respect to quality management • how improvements to quality management of projects have been acted upon
Underpinning Knowledge and Attitudes	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • the principles of project quality management and their application • acceptance of responsibilities for project quality management • use of quality management systems and standards • the place of quality management in the context of the project life cycle • appropriate project quality management methodologies; and their capabilities, limitations, applicability and contribution to project outcomes • attributes: <ul style="list-style-type: none"> ➢ analytical, attention to detail, able to maintain an overview, communicative and positive leadership
Underpinning Skills	<ul style="list-style-type: none"> • ability to relate to people from a range of social, cultural and ethnic backgrounds, and physical and mental abilities • project management • quality management • planning and organizing • communication and negotiation • problem-solving • leadership and personnel management • monitoring and review skills
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	Competence may be assessed through: <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Facilitate and Capitalize on Change and Innovation
Unit Code	IND COM5 17 0613
Unit Descriptor	This unit specifies the outcomes required to plan and manage the introduction and facilitation of change; particular emphasis is on the development of creative and flexible approaches, and on managing emerging opportunities and challenges.

Elements	Performance Criteria
1. Participate in planning the introduction and facilitation of change	<p>1.1 Manager contributes effectively to the organization's planning processes to introduce and facilitate change.</p> <p>1.2 Plans are made to introduce change in consultation with appropriate stakeholders.</p> <p>1.3 Organization's objectives and plans are communicated effectively to introduce change to individuals and teams.</p>
2. Develop creative and flexible approaches and solutions	<p>2.1 Variety of approaches are identified and analyzed to manage workplace issues and problems.</p> <p>2.2 Risks are identified and assessed, and action initiated to manage these to achieve a recognized benefit or advantage to the organization.</p> <p>2.3 Workplace is managed in a way which promotes the development of innovative approaches and outcomes.</p> <p>2.4 Creative and responsive approaches to resource management improve productivity and services, and/or reduce costs.</p>
3. Manage emerging challenges and opportunities	<p>3.1 Individuals and teams are supported to respond effectively and efficiently to changes in the organization's goals, plans and priorities.</p> <p>3.2 Coaching and mentoring are made to assist individuals and teams to develop competencies to handle change efficiently and effectively.</p> <p>3.3 Opportunities are identified and taken as appropriate, to make adjustments and to respond to the changing needs of customers and the organization.</p> <p>3.4 Information needs of individuals and teams are anticipated and facilitated as part of change implementation and management.</p> <p>3.5 Recommendations for improving the methods and techniques to manage change are identified, evaluated and negotiated with appropriate individuals and groups.</p>

Variables	Range
Manager	a person with frontline management roles and responsibilities, regardless of the title of their position
Appropriate stakeholders	May include but not limited to: <ul style="list-style-type: none"> • organization directors and other relevant managers • teams and individual employees who are both directly and indirectly involved in the proposed change • union/employee representatives or groups • OHS committees • other people with specialist responsibilities • external stakeholders where appropriate - such as clients, suppliers, industry associations, regulatory and licensing agencies
Risks	May include but not limited to: <ul style="list-style-type: none"> • any event, process or action that may result in goals and objectives of the organization not being met • any adverse impact on individuals or the organization • various risks identified in a risk management process
Information needs	May include but not limited to: <ul style="list-style-type: none"> • new and emerging workplace issues • implications for current work roles and practices including training and development • changes relative to workplace legislation, such as OHS, workplace data such as productivity, inputs/outputs and future projections • planning documents • reports • market trend data • scenario plans • customer/competitor data

Evidence Guide	
Critical Aspects of Competence	Demonstrates skills and knowledge in: <ul style="list-style-type: none"> • Planning the introduction and facilitation of change • Developing creative and flexible approaches and solutions • Managing emerging challenges and opportunities
Underpinning Knowledge and Attitudes	Demonstrate knowledge of: <ul style="list-style-type: none"> • Relevant legislation from all levels of government that affects business operation, especially in regard to occupational health and safety and environmental issues, equal opportunity, industrial relations and anti-discrimination • the principles and techniques involved in: <ul style="list-style-type: none"> • change and innovation management • development of strategies and procedures to implement and facilitate change and innovation • use of risk management strategies: identifying hazards,

	<ul style="list-style-type: none"> • assessing risks and implementing risk control measures • problem identification and resolution • leadership and mentoring techniques • management of quality customer service delivery • consultation and communication techniques • record keeping and management methods • the sources of change and how they impact • factors which lead/cause resistance to change • approaches to managing workplace issues
Underpinning Skills	<p>Demonstrate skills on:</p> <ul style="list-style-type: none"> • Communication skills • Planning work • Managing risk
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Establish and Conduct Business Relationships
Unit Code	IND COM5 18 1613
Unit Descriptor	This unit covers the skills, attitudes and knowledge required to manage business relationship with customers.

Elements	Performance Criteria
1. Establish contact with customer	<p>1.1 Welcoming customer environment is maintained.</p> <p>1.2 Customer is greeted warmly according to enterprise policies and procedures.</p> <p>1.3 Effective service environment is created through verbal and non-verbal presentation according to enterprise policies and procedures.</p> <p>1.4 Customer data is maintained to ensure database relevance and currency.</p> <p>1.5 Information on customers and service history is gathered for analysis.</p> <p>1.6 Opportunities to maintain regular contact with customers are identified and taken up.</p>
2. Clarify needs of customer	<p>2.1 Customer needs are determined through questioning and active listening.</p> <p>2.2 Customer needs are accurately assessed against the products/services of the enterprise.</p> <p>2.3 Customer details are documented clearly and accurately in required format.</p> <p>2.4 Negotiations are conducted in a business-like and professional manner.</p> <p>2.5 Maximize benefits for all parties in the negotiation through use of established negotiation techniques and in the context of establishing long term relationships.</p> <p>2.6 The results of negotiations are communicated to appropriate colleagues and stakeholders within appropriate timeframes.</p>
3. Provide information and advice	<p>3.1 Features and benefits of products/services provided by the enterprise are described / recommended to meet customer needs.</p> <p>3.2 Information is provided to satisfy customer needs.</p> <p>3.3 Alternative sources of information/advice are discussed with the customer.</p>
4. Foster and maintain business relationships	<p>4.1 Pro-actively seek, review and act upon information needed to maintain sound business relationships.</p> <p>4.2 Agreements are honored within the scope of individual responsibility.</p>

	<p>4.3 Adjustments to agreements are made in consultation with the customer and share information with appropriate colleagues.</p> <p>4.4 Nurture relationships through regular contact and use of effective interpersonal and communication styles.</p>
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Variables	Range
Opportunities to maintain regular contact with customers	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • informal social occasions • industry functions • association membership • co-operative promotions • program of regular telephone contact
Negotiation techniques	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • identification of goals, limits • clarification of needs of all parties • identifying points of agreement and points of difference • preparatory research of facts • active listening and questioning • non-verbal communication techniques • appropriate language • bargaining • developing options • confirming agreements • appropriate cultural behavior

Evidence Guide	
Critical Aspects of Competence	<p>Demonstrates skills and knowledge in:</p> <ul style="list-style-type: none"> • consistently applying enterprise policies and procedures and industry codes of practice in regard to customer service • providing a quality service environment by treating customers in a courteous and professional manner through all stages of the procedure • using effective questioning/active listening and observation skills to identify customer needs • communicating effectively with others involved in or affected by the work • maintaining relevant and current customer databases in accordance with enterprise policies and procedures • ability to build and maintain relationships to achieve successful business outcomes
Underpinning Knowledge and Attitudes	<p>Demonstrate knowledge of:</p> <ul style="list-style-type: none"> • Operational knowledge of enterprise policies and procedures in regard to: <ul style="list-style-type: none"> ➤ customer service ➤ dealing with difficult customers ➤ maintenance of customer databases

	<ul style="list-style-type: none"> ➤ allocated duties/responsibilities ➤ General knowledge of the range of enterprise merchandise and services, location of telephone extensions and departments/sections • Basic operational knowledge of legislation and statutory requirements, including consumer law, trade practices and fair trading legislation • Basic operational knowledge of industry/workplace codes of practice in relation to customer service • negotiation and communication techniques appropriate to negotiations that may be of significant commercial value
Underpinning Skills	<p>Demonstrate skills to:</p> <ul style="list-style-type: none"> • Use workplace technology related to use of customer database • Collect, organize and understand information related to collating and analyzing customer information to identify needs • Communicate ideas and information • Plan and organize activities concerning information for database entries • Use mathematical ideas and techniques to plan database cells and size • Establish diagnostic processes which identify and recommend improvements to customer service
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Occupational Standard: Chemical Products Processing Management Level V	
Unit Title	Manage Continuous Improvement Process (Kaizen)
Unit Code	IND COM5 19 0613
Unit Descriptor	This unit describes the performance, outcomes, knowledge, attitude and skills required to sustain and develop an environment in which continuous improvement, innovation and learning are promoted, rewarded and managed.

Elements	Performance criteria		
1. Diagnose the current status.	<p>1.1 Parameters used for study current situation are obtained.</p> <p>1.2 Internal and external environment is analyzed.</p> <p>1.3 Problems related to targeted environment is recognized and identified.</p> <p>1.4 Problems regarding to current situation are analyzed.</p> <p>1.5 Alternatives are generated.</p> <p>1.6 Best alternatives are selected.</p>		
2. Design an effective continuous improvement process (kaizen).	<p>2.1 The values, mission and goals of kaizen management system are clarified.</p> <p>2.2 The kaizen management template and a visual management logo full of purpose and meaning are developed.</p> <p>2.3 A clear action strategy (master and detailed plans) is defined.</p> <p>2.4 The most effective and proven kaizen tools are chosen and applied.</p> <p>2.5 A practical way is identified to involve all employees in Gemba activities (top, middle and bottom).</p>		
3. Develop change capability.	<p>3. 1. Kaizen Promotion Team Structure is developed.</p> <p>3. 2. The Kaizen Training Plan is defined and started.</p> <p>3. 3. Supervisors' kaizen capability and habits are developed.</p> <p>3. 4. Key people are developed in terms of Individual leadership capability.</p>		
4. Implement improved processes.	<p>4.1 Sustainability/continuous improvement are promoted as an essential part of doing business.</p> <p>4.2 Impacts of change and consequences are addressed for people, and transition plans implemented.</p> <p>4.3 Objectives, time frames, measures and communication plans are ensured in place to manage implementation.</p> <p>4.4 Contingency plans are implemented in the event of non-performance.</p> <p>4.5 Failure is followed-up by prompt investigation and analysis of causes.</p>		
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	<p>4.6 Emerging challenges and opportunities are managed effectively.</p> <p>4.7 Continuous improvement systems and processes are evaluated regularly.</p> <p>4.8 Improvements are communicated to all relevant groups and individuals.</p> <p>4.9 Opportunities are explored for further development of value stream improvement processes.</p>
5. Establish direction and control.	<p>5.1 A system audit tool is defined and implemented.</p> <p>5.2 The kaizen management system is deployed across all company levels and functions.</p> <p>5.3 Results are checked and corrections made.</p> <p>5.4 Standard operating procedures are developed and maintained.</p> <p>5.5 The recruit, training and evaluation systems are improved and HR practices compensated.</p>

Variable	Range
Parameters	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Working condition • Resources may include: <ul style="list-style-type: none"> ➤ Human ➤ Material ➤ Machine • Kaizen elements
Kaizen management template	<p>Visual management board for:</p> <ul style="list-style-type: none"> • displaying characteristic figures, data and graphics • depicting and controlling processes • identifying and marking sources of risks, setting and standards • displaying company's values and goals of kaizen
Kaizen tools	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • 5S (a visual workplace management) • 7 QC tools(Cause and Effect Diagram, Check Sheet , Pareto Diagram , Histogram, Scatter Diagram, Control Chart and Flow Chart) • Brainstorming • Basic Industrial Engineering (IE) tools such as time study, motion study, line balancing, work sampling • JIT(JUST IN TIME principles) • MUDA identification and elimination tools • Kanban • Poka-yoke • Takt- time
Gemba activities	<p>May include but not limited to:</p> <ul style="list-style-type: none"> • Value-adding activities to satisfy the customer

	<ul style="list-style-type: none"> Employee autonomous operations (participating in team to identify nonconformity, propose solutions and implement them autonomously) 		
Individual leadership capability	<p>May include but not limited to:</p> <ul style="list-style-type: none"> Personal and interpersonal skills Courage Honour and integrity Energy and drive Strategic skills Operating skills Organizational positioning skills 		
Sustainability/continuous improvement	<p>Improvements made by following PDCA (Plan, Do, Check and Act) cycle for:</p> <ul style="list-style-type: none"> Improvements in one's own work Saving in energy, material and other resources Improvements in the working environment Improvements in machines and processes Improvements in jigs and tools Improvement in office work Improvements in product quality Ideas for new products Customers services and customer relations 		
System audit tool	<p>May include but not limited to:</p> <ul style="list-style-type: none"> 5S audit Patrol system Kaizen board 5M check lists Key Performance Indicators (KPIs) 		
Standard operating procedure	<p>May include but not limited to:</p> <ul style="list-style-type: none"> Administrative standards for: <ul style="list-style-type: none"> Managing the business Administration Personnel Guidelines Job Descriptions Guidelines for preparing cost information Operation standards for: <ul style="list-style-type: none"> Describing the way a job is done. Help realising Quality, cost, delivery. Addressing the need to satisfy customers. Using the process that's the best. Producing work in the most cost effective manner. Assuring total quality for the customer. 		
HR practices	<p>May include but not limited to:</p> <ul style="list-style-type: none"> Resources may include: <ul style="list-style-type: none"> Recruit and retain high quality people with innovative skills and a good track, record in innovation HR development is used for: 		
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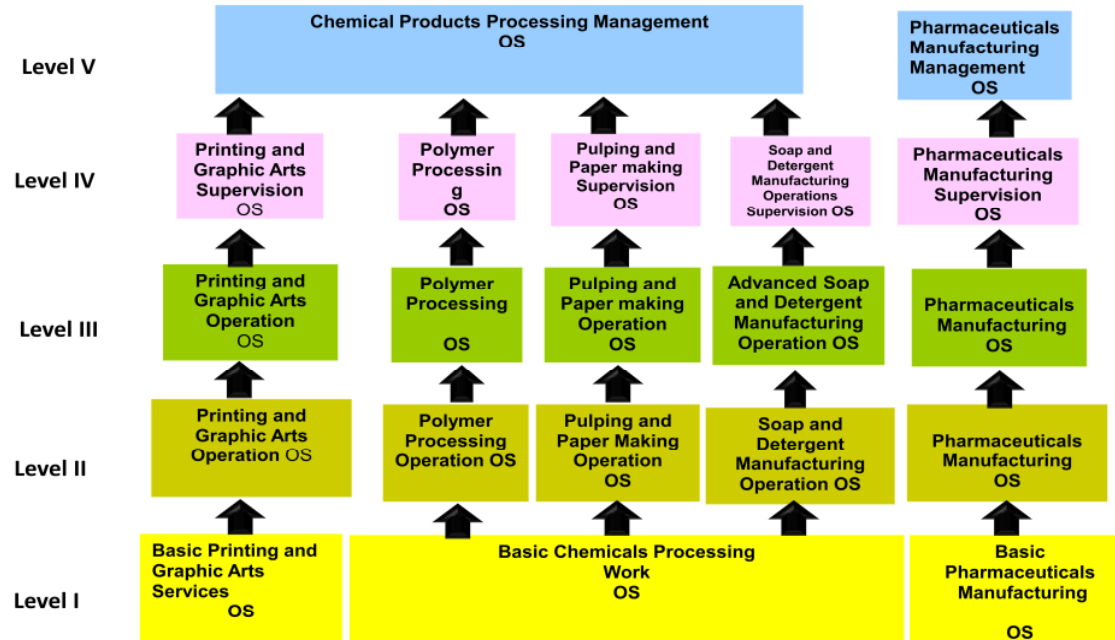
	<ul style="list-style-type: none"> ➤ strategic capability and provide encouragement and facilities for enhancing innovating skills and enhancing the intellectual capital of the organization • Reward will: <ul style="list-style-type: none"> ➤ Provide financial incentives and rewards and recognition for successful innovation
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Evidence Guide

Critical Aspects of Assessment	<p>Demonstrates skills and knowledge competencies to:</p> <ul style="list-style-type: none"> • Establish policy and cross-functional goals for kaizen • Deploy and implement goals as directed through policy deployment and cross-functional management. • Realize goals through deployment and audits. • Build systems, procedures, and structures conducive to kaizen. • Use kaizen in functional capabilities. • Introduce Kaizen as a corporate strategy • Provide support and direction between allocating resources • Establish, maintain and upgrade standards. • Make employees conscious through training programs. • Assist employees develop skills and tools for problem solving.
Underpinning Knowledge and Attitude	<p>Demonstrates knowledge of:</p> <ul style="list-style-type: none"> • Quality management and continuous improvement theories • creativity/innovation theories/concepts • competitive systems and practices tools, including: <ul style="list-style-type: none"> ➤ 5S ➤ JUST IN Time (JIT) ➤ mistake proofing ➤ process mapping ➤ establishing customer pull ➤ setting of KPIs/metrics ➤ SOP ➤ Kaizen elements/targets. ➤ identification and elimination of waste/MUDA ➤ continuous improvement processes including implementation, monitoring and evaluation strategies for a whole organization and its value stream ➤ Difference between breakthrough improvement and continuous improvement ➤ organizational goals, processes and structure ➤ approval processes within organization ➤ methods of determining the impact of a change ➤ customer perception of value ➤ Define, Measure, Analyze, Improve and Control (DMAIC) to sustain process

Underpinning Skills	<p>Demonstrates Skills to:</p> <ul style="list-style-type: none"> • Use leadership skills to foster a commitment to quality and openness to improvement. • Analyze training needs and implementing training programs • Prepare and maintain quality and audit documentation • Undertake self-directed problem solving and decision-making on issues of a broad and/or highly specialized nature and in highly varied and/or highly specialized contexts • Communicate at all levels in the organization and to audiences of different levels of literacy and numeracy • Analyze current state/situation of the organization. • Analyze individually and collectively the implementation of competitive systems and practices tools in the organization and determining strategies for improved implementation • Solve highly varied and highly specialized problems related to competitive systems and practices implementation and continuous improvement to root cause • Negotiate with stakeholders, where required, to obtain information required for implementation and refinement of continuous improvements, including management, unions, employees and members of the community. • Review relevant metrics, including all those measures which might be used to determine the performance of the improvement system, including: <ul style="list-style-type: none"> ➢ Key Performance Indicators (KPIs) for existing processes ➢ Quality statistics ➢ Delivery timing and quantity statistics ➢ Process/equipment reliability ('uptime')
Resources Implication	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Methods of Assessment	<p>Competence may be assessed through:</p> <ul style="list-style-type: none"> • Interview / Written Test • Observation / Demonstration with Oral Questioning
Context of Assessment	Competence may be assessed in the work place or in a simulated work place setting.

Sector: Industry
Chemical Products Manufacturing



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COMMENT TEMPLATE

The Federal TVET Agency values your feedback of the document.
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- **Phone# +251911207386/+251911641248/+251923787992 and**
- **E-mail: bizunehdebebe@yahoo.com/ Abebaw_maemer@yahoo.com /won_get@yahoo.com.**