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GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 923

5 October 2007



SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Mining and Minerals

registered by Organising Field 06 – Manufacturing, Engineering and Technology, publishes the following Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Unit Standards. The full Unit Standards can be accessed via the SAQA web-site at www.saq.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Unit Standards should reach SAQA at the address below and **no later than 5 November 2007**. All correspondence should be marked **Standards Setting – Mining and Minerals** and addressed to

The Director: Standards Setting and Development
SAQA
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DR. S. BHIKHA

DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Work in mineral product silos and bins for operational or maintenance purposes

SAQA US ID	UNIT STANDARD TITLE		
252234	Work in mineral product silos and bins for operational or maintenance purposes		
ORIGINATOR		PROVIDER	
SGB Mining and Minerals			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Fabrication and Extraction	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

SPECIFIC OUTCOME 1

Demonstrate an understanding of working in mineral product bins and silos.

SPECIFIC OUTCOME 2

Prepare to work in bins and silos.

SPECIFIC OUTCOME 3

Work in mineral product bins and silos.

SPECIFIC OUTCOME 4

Finalise working in mineral product bins and silos.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Analyse and interpret mineralogical composition of cement and clinker**

SAQA US ID	UNIT STANDARD TITLE		
252235	Analyse and interpret mineralogical composition of cement and clinker		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	10

SPECIFIC OUTCOME 1

Demonstrate an understanding of the mineralogical composition of cements and clinkers and the methods used for analysis.

SPECIFIC OUTCOME 2

The preparation and presentation of the samples of cement/clinker is carried out according to approved methods.

SPECIFIC OUTCOME 3

The analysis of the samples of cement/clinker is carried out in accordance with approved methods.

SPECIFIC OUTCOME 4

The interpretation of the mineralogical composition of the samples is performed.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform standard cement/lime industry wet chemical analysis

SAQA US ID	UNIT STANDARD TITLE		
252236	Perform standard cement/lime industry wet chemical analysis		
ORIGINATOR	PROVIDER		
SGB Mining and Minerals			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	17

SPECIFIC OUTCOME 1

Explain the principles related to wet chemical analysis.

SPECIFIC OUTCOME 2

Prepare for analysis.

SPECIFIC OUTCOME 3

Conduct wet chemical analysis.

SPECIFIC OUTCOME 4

Interpret and report analysis results.

SPECIFIC OUTCOME 5

Follow basic health and safety practices during wet chemical analysis.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

None

No. 924

5 October 2007

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Pulp and Paper

registered by Organising Field 06 – Manufacturing, Engineering and Technology, publishes the following Qualification and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification and Unit Standards. The full Qualification and Unit Standards can be accessed via the SAQA web-site at www.saqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later than 5 November 2007**. All correspondence should be marked **Standards Setting – Pulp and Paper** and addressed to

The Director: Standards Setting and Development
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DR S BHIKHA

DIRECTOR: STANDARDS SETTING AND DEVELOPMENT


SOUTH AFRICAN QUALIFICATIONS AUTHORITY
QUALIFICATION:
National Certificate: Pulp and Paper Operations

SAQA QUAL ID	QUALIFICATION TITLE		
59038	National Certificate: Pulp and Paper Operations		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	130	Level 2	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION
Purpose:

This qualification builds onto the GETC: Chemical Operations. This qualification builds onto the largely theoretical foundation laid at NQF Level 1. The qualification allows the learner a choice of elective specialisation areas associated with the different operational areas of a pulp and paper production facility. This qualification will supply the learner with the competencies needed to take responsibility for a significant process in the pulp and paper manufacturing industry. It also provides the basis upon which further related learning and career development can take place.

Qualifying learners will:

- Demonstrate understanding of the Pulp and Paper industry.
- Apply safety, health and environmental principles and procedures in the workplace.
- Monitor and control pulp and paper process operations in a process environment.
- Maintain quality in a processing environment.

Social development and economic transformation are enhanced through efficient task performance, and career development and personal job satisfaction of processing personnel are facilitated through the learning process used to achieve the competency specified.

This qualification will contribute to the full development of the learner within the pulp and paper industry by providing recognition, further mobility and transportability within the field. The skills, knowledge and understanding demonstrated within this qualification are essential for social and economic transformation and contribute to the progression and economic growth within the pulp and paper processing and maintenance fraternity.

Rationale:

This qualification replaces the National Certificate: Pulp and Paper Manufacturing NQF Level 2 (ID 35941).

This qualification is the second in a learning pathway for people working in the pulp and paper processing industry who need to progress beyond NQF Level 2 in Pulp and Paper Operations. The NQF Level 2, 3, and 4 qualifications in Pulp and Paper Operations are aimed at the learner

who wants to gain competence in the skills needed for pulp and paper manufacturing operations in a pulp and paper mill.

The N.C. Pulp and Paper Operations allows the learner a choice of specialisation areas in the pulp and paper manufacturing industry. This competence provides the foundation needed to progress in the pulp and paper industry. Through the employment of competent personnel, employers and the industry have confidence that this critical work in the industry is efficiently carried out.

Typical learners are operating personnel working in a chemical or a pulp and paper processing plant. The pulp and paper industry is well established in South Africa and its success is dependant upon the efficient production of products. Achievement of this objective is largely dependant upon the competence, recognised by this qualification, of the people who operate processing equipment. An adequate number of people with these skills are needed to ensure that the pulp and paper production units in South Africa operate productively.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

This qualification has been designed as the second in a series of four qualifications for pulp and paper operations in the pulp and paper processing and related manufacturing industry.

It is assumed that learners are already competent in:

- GET Certificate: Chemical Operations or equivalent.
- Communication, mathematical literacy, natural science and technology principles at NQF Level 1/ABET Level 4.

Recognition of Prior Learning:

Recognition of prior learning must be carried out in accordance with the policy and rules specified and used by the ETQA responsible for evaluation of people seeking RPL for a part of the whole qualification.

Access to the Qualification:

Access is open to anyone with access to learning opportunities and work experience on an appropriate selection of systems. The learning assumed to be in place is essential to the learning specified in this qualification. If the learner is not yet competent in this regard the shortfalls must be addressed prior to commencing with learning specified in this qualification. This is necessary to ensure the safety of the learner, co-workers, the work process and the environment.

Access for learners with disabilities is dependant on the:

- Type and severity of the disability.
- Nature of the operational processes and requirements of the equipment.

QUALIFICATION RULES

In the compulsory Fundamental Component of the qualification, a learner must demonstrate his/her competence in the 20 credits in the field of Communication plus 16 credits in the field of Mathematical Literacy.

The unit standards in the compulsory Core Component of the qualification reflect the skills and competencies needed for building expertise in pulp and paper operations. In the Core Component, the learner must demonstrate his/her competence in the total of 78 credits.

The Elective component is made up of the following:

Pulp and paper specific electives of which at least one Unit standard must be selected:

Pulp and paper electives: Select at least 1 Unit standard:

NRLD ID, Level, Credits:

- ID 246616: Receive and store logs in a woodyard, Level 2, 4 Credits.
- ID 246613: Handle and store bark for further processing, Level 2, 3 Credits.
- ID 246620: Prepare and supply bagasse, 13689 (Rev.), Level 2, 4 Credits.
- ID 246619: Classify secondary fibre as per the South African grade definition, Level 2, 4 Credits.
- ID 246624: Produce bales of secondary fibre using a baling machine, Level 2, 3 Credits.
- ID 246618: Produce cut cores for the pulp and paper industry, Level 2, 3 Credits.
- ID 246608: Produce embossed paper, board or tissue, Level 2, 4 Credits.
- ID 244615: Produce laminated paper or board, Level 2, 8 Credits.
- ID 246610: Produce wrapped finished paper, board and tissue products, Level 2, 4 Credits.
- ID 110040: Manufacture cores for the pulp and paper industry, Level 2, 8 Credits.

Electives: The qualification is completed by selecting sufficient credits from this section to make up 130 credits:

NRLD ID, Level, Credits:

- ID 9965: Render basic first aid, Level 2, 3 Credits.
- ID 244071: Apply sampling theory and practice, Level 2, 5 Credits.
- ID 244073: Receive, handle and store hazardous chemicals safely, Level 2, 5 Credits.
- ID 110075: Apply basic fire fighting, Level 1, 3 Credits.
- ID 115188: Apply environmental protection procedures, Level 2, 4 Credits.
- ID 114639: Control waste or effluent water in a manufacturing environment, Level 2, 4 Credits.
- ID 116256: Sling and communicate during crane operations, Level 2, 4 Credits.
- ID 244365: Lift and move material and equipment by means of a forklift, Level 2, 3 Credits.
- ID 116235: Operate a pendant controlled overhead crane, Level 2, 5 Credits.
- ID 244605: Participate effectively in a team or group, Level 2, 2 Credits.
- ID 9268: Manage basic personal finance, Level 2, 6 Credits.
- ID 116935: Enhance, edit and organise electronic messages, Level 2, 2 Credits.
- ID 116937: Create and edit spreadsheets, Level 2, 4 Credits.
- ID 116931: Use a web-browser to search the Internet, Level 2, 4 Credits.
- ID 117924: Use a word processor to format documents, Level 2, 5 Credits.

EXIT LEVEL OUTCOMES

1. Demonstrate understanding of the Pulp and Paper Industry.
1. Demonstrate understanding of the Pulp and Paper Industry.
2. Apply safety, health and environmental principles and procedures in the workplace.
2. Apply safety, health and environmental principles and procedures in the workplace.
3. Monitor and control pulp and paper process operations in a process environment.
3. Monitor and control pulp and paper process operations in a process environment.
4. Maintain quality in a pulp and paper processing environment.
4. Maintain quality in a pulp and paper processing environment.

Critical Cross-Field Outcomes:

Critical Cross-Field Outcomes:

Each Critical Cross-Field Outcome was considered in terms of its applicability to each of the specific outcomes for each unit standard. Where it was found to be applicable, the nature of the skills being developed was specified by the working group and captured in the standard.

Critical Cross-Field Outcomes are assessed per unit standards and are part of all Exit Level Outcomes;

Critical Cross-Field Outcomes have been addressed by the exit level outcomes as follows:

Critical Cross-Field Outcomes, Evident in Exit Level Outcomes:

While performing integrated pulp and paper process operations, qualifying learners can:

Identify and solve problems in which response displays that responsible decisions, using critical and creative thinking, have been made by:

- Responding to emergencies in a processing environment, Evident in Exit Level Outcome 2.
- Monitoring and controlling quality assurance practices, Evident in Exit Level Outcome 2, 3 and 4.
- Applying operating procedures, Evident in Exit Level Outcome 3 and 4.
- Solving operating problems using relevant technologies, Evident in Exit Level Outcome 3 and 4.

Work effectively with others as a member of a team, group, organisation or community by:

- Working in a coordinated team during processing operations, Evident in Exit Level Outcome 3.
- Coordinating one's work with that of others in the direct surrounding area, internal and external operations, Evident in Exit Level Outcome 1, 2, 3 and 4.

Organise and manage oneself and one's activities responsibly and effectively by:

- Using operating instructions to control process plant conditions, Evident in Exit Level Outcome 3.
- Implementing the steps to solve operating problems in a process plant, Evident in Exit Level Outcome 3 and 4.
- Applying quality procedures in a process environment to maintain product quality, Evident in Exit Level Outcome 3 and 4.

Collect, analyse, organise and critically evaluate information by:

- Monitoring operational parameters, Evident in Exit Level Outcome 3 and 4.
- Collating and sorting product quality data, Evident in Exit Level Outcome 3 and 4.
- Appreciating and understanding the Pulp and Paper Industry, Evident in Exit Level Outcome 1, 3, and 4.
- Managing records, reports and stock, Evident in Exit Level Outcome 2, 3 and 4.

Communicate effectively by using mathematical and/or language skills in the modes of oral and/or written presentations by:

- Recording and interpreting instrument readings, Evident in Exit Level Outcome 3 and 4.
- Preparing and presenting reports, Evident in Exit Level Outcome 3 and 4.

Use science and technology effectively and critically, showing responsibility towards the environment and health of others by:

- Working according to health and safety regulations, Evident in Exit Level Outcome 2, 3 and 4.
- Controlling technologically advanced production equipment according to operating procedures, Evident in Exit Level Outcome 2, 3, and 4.

Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation by:

- Describing technologies and equipment used in the production of pulp, paper, tissue and board, Evident in Exit Level Outcome 1.
- Explaining the interdependence of the different specialisation areas in the pulp and paper environment, Evident in Exit Level Outcome 1.
- Adjusting equipment and machinery while taking cognisance of the downstream impact, 3 and 4.

Contribute to the full personal development of each learner and the social and economic development of the society at large by:

- Maintaining and applying safety practices in the production environment, Evident in Exit Level Outcome 2, 3 and 4.
- Maintaining and applying quality practices in the production environment, Evident in Exit Level Outcome 3 and 4.
- Performing core operating functions, Evident in Exit Level Outcome 3.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment criteria for Exit Level outcome 1:

- Technologies and equipment used in the production of pulp, paper, tissue and board are described as applicable in own plant and the total pulp and paper industry.
- The role and impact of each of the specialisation areas in the pulp and paper industry are appreciated and explained in accordance with specified requirements.
- The interdependence of the different specialisation areas in the pulp and paper environment is explained in accordance with specified requirements.

Associated Assessment criteria for Exit Level outcome 2:

- General safety, health and environmental protection procedures are applied as applicable to the pulp and paper industry.
- Emergencies in a process environment are responded to in accordance with specified requirements.
- The application of the work permit system is explained as applicable to the pulp and paper industry.

Associated Assessment criteria for Exit Level outcome 3:

- The principles of chemistry and physics are explained in relation to a processing environment.
- Operating instructions are used to control process plant conditions.
- Statistical process control is performed in accordance with specifications.
- Plant is monitored in a process environment in accordance with specified requirements.
- Operating problems are solved using relevant technologies during process operations.
- The principles of heat transfer equipment and liquid-solid and solid-solid separation processes are explained as applicable to pulp and paper process operations.

Associated Assessment criteria for Exit Level outcome 4:

- The quality of products is maintained in a production environment.
- Statistical process control is performed in accordance with specifications.

- Operating problems are solved using relevant technologies to maintain product quality.

Integrated Assessment:

The applied competence (practical, foundational and reflexive competencies) of this qualification will be achieved if a candidate is able to achieve all the exit level outcomes of this qualification.

Appropriate methods and tools must be used to assess practical, foundational and reflexive competence of the learner in all the exit level outcomes listed above, as well as to determine a learner's ability to solve problems, work in a team, organise him/herself, use applied science, and understand the implications of actions and reactions in the world as a set of related systems. Such an assessment process will determine development of the whole person, and the integration of applied knowledge and skills.

Assessors should develop, conduct, and ensure integration of, assessment by making use of a range of formative and summative assessment methods against the unit standards that make up the qualification. Combinations of applied, foundational and reflective competencies, including Critical Cross-field Outcomes, should be assessed wherever possible.

Moderators should ensure that assessment is valid, consistent and integrated into work or learning, and that there is sufficient and authenticated evidence of learner competence against the whole qualification.

INTERNATIONAL COMPARABILITY

An extensive international comparability comparison was made including Australia, New Zealand, Britain, Scotland, Canada, the USA, Sweden, Finland, Germany and relevant African countries.

USA, Canada, Scandinavia and Germany:

Despite the fact that the pulp and paper industry is very well-developed in all the countries in the extreme northern areas of the world, most operators are still trained on the job with some short courses offered by equipment suppliers.

In the USA staff is mostly trained on the specific machines they operate at the time of establishing a new mill. TAPPI (a technical association for the pulp, paper and converting industry) offers a wide range of short, technical courses for operating staff. A number of pulp and paper related university degrees are also offered in the USA.

Canada has the largest pulp operations in the world, but has no formal national qualifications registered. As is the international trend, most operator training is done on the job. However, a number of colleges offer a Pulp and Paper Operations Certificate (post school) training course. The courses generally train the learners from 7 to 9 months in general pulp and paper mill operations for entry level machine and utility operators. As in the USA, pulp and paper related degrees are offered by local universities.

The Scandinavian pulp and paper industry (including Sweden, Norway and Finland) follows the same trend. Most training is done on the job, with no vocational training leading to a qualification. As in the USA there are a variety of pulp and paper degrees on offer at universities in all three these countries.

Three year Paper Technology Diplomas are offered by several German Universities. Although these diplomas have a strong workplace emphasis, they are comparable to South African diplomas rather than vocational training qualifications. Subject content is similar to that contained in the technical part of the South African qualification, namely: industry background,

machine operations and components, maintenance functions, computer skills with a technical project to complete the diploma.

Africa:

African countries with manufacturing facilities (including SADC countries) were searched for applicable qualifications or training programmes, but no relevant qualifications are offered in any of these countries. Similar to international companies, the majority of training is provided by equipment suppliers with three to five day short training courses. The only pulp and paper facility in the SADC outside South Africa is in Swaziland-learners from this facility will be trained according to the South African qualification.

New Zealand:

A comparison with the NZQA was included, because it is an educational structure comparable to the NQF. An internet search of the NZQA revealed three registered qualifications (National Certificates) ranging from Levels 2 to 4 in Pulp and Paper Manufacturing.

The New Zealand "National Certificate in Pulp and Paper Manufacturing (Level 2)" is an introduction to pulp and paper operations containing a compulsory core component consisting of units standards in communication, teamwork, employment relations, health, safety, quality, environmental protection and manufacturing process knowledge. The learner has to choose 10 credits from Elective Group A which contains unit standards dealing with specific pulp and paper industry skills and 19 credits from Elective Group B which is made up of general unit standards such as workplace safety, distribution, business administration and computer skills.

The compulsory core sections of the National Certificates in Pulp and Paper Manufacturing Levels 3 and 4 are common so that people wishing to progress from the Level 3 qualification to the Level 4 qualification have a common grounding in the principles of pulp and paper manufacturing. This core component consist of unit standards with a technical focus such as pumps and valves, chemistry and physics and the fundamentals of process control systems make up.

For competence in the "National Certificate in Pulp and Paper Manufacturing (Level 3)" the learner needs to prove competence in the 28 credits core unit standards, 35 credits from pulp and paper specialisation areas and 27 general electives. The general elective sections of both Level 3 and 4 qualifications also provide recognition for a range of manufacturing and generic industry skills; and cover areas such as workplace safety, distribution, business administration, and communications.

Just as in the South African NQF Level 4 qualification, learners completing the "National Certificate in Pulp and Paper Manufacturing (Level 4)" specialise in either pulpmaking, papermaking or chemical recovery. The learner needs to prove competence in a total of 120 credits which consist of 28 credits core unit standards and 35 credits specialisation electives. If all 28 credits for the core were obtained in the Level 3 qualification these credits are reflected here again.

The South African qualifications compare very well with the New Zealand qualifications, but the fact that the South African qualifications have a fundamental component of communication and mathematical unit standards is advantageous for the South African learner.

Australia:

An internet search of the AQF revealed that the following four qualifications are registered on the AQF:

- "Certificate I in Pulp and Paper Manufacturing",
- "Certificate II in Pulp and Paper Manufacturing".
- "Certificate III in Pulp and Paper Manufacturing".
- "Certificate IV in Pulp and Paper Manufacturing".

A comparison with these qualifications was included because the AQF is an educational structure comparable to the NQF.

The new Australian "Certificate I in Pulp and Paper Manufacturing" contains only a compulsory core consisting of five units in communication, safety, quality and the use of hand held tools which all have to be achieved. This qualification is not compulsory for entry to the pulp and paper qualifications as the majority of trainees enter the industry at Certificate II level.

The Level 2 to 4 qualifications all have a compulsory core consisting mainly of communication, safety and quality. The Level 3 and 4 qualifications also include a compulsory unit on problem solving.

From Level 2 onwards the learner has to choose specialisation units from the following range of specialisation areas: Primary resources, pulping operations, chemical recovery and waste paper handling, waste paper operations, stock preparation, wet end operations, dry end operations, paper coating and finishing and converting.

The Level 2 and 3 qualifications are completed with a choice of two elective units. The Level 2 and 3 elective component consist of a range of safety, emergencies, first aid, training, cramage and specialist technical skills Unit Standards.

The new Australian "Certificate IV in Pulp and Paper Manufacturing" has a compulsory core consisting of communication, productivity calculations, OHS policy and procedures, quality and advanced problem solving. This learner already specialises in one specific area and has to make a choice of one specialisation unit from the following range of specialisation areas: resources, pulping operations, chemical recovery and paper manufacture. The qualification is completed with a choice of three elective units ranging from leadership, workplace relationships, customer care, training and assessment, to cramage and sampling units.

The South African qualification includes similar core qualification structures and progressions from NQF Level 2 to NQF Level 4 and also uses separate qualifications to address pulp and paper production and pulp and paper hygiene products manufacturing. The main difference is that the Australian qualification requires of the learner to choose a specialisation area in Level 2, whereas the South African qualification offers the learner the opportunity to gain an overview of all the pulp and paper processes on Level 2 before choosing a specialisation area in Level 3.

Britain:

A comparison with the British qualification was included, because the British pulp and paper industry is very well developed and the NVQ is an educational structure comparable to the NQF. An internet search of the British NVQ and the Scottish SVQ revealed the following Level 2 and 3 qualifications:

- The PAAWQSET Level 2 Certificate in Paper Technology.
- The PAAWQSET Level 3 Certificate in Paper Technology.

The South African NQF Level 2 qualification compares very well with the British Level 2 qualification which is made up of six compulsory units in Health and Safety, quality, raw materials, papermaking processes, plant services and process control. The main difference is that the British qualifications contain no fundamental communication and mathematical units.

The PAAWQSET Level 3 Certificate in Paper Technology has a compulsory core containing units on Health and Safety, quality, teamwork and problem solving. The learner has to choose between Group B units and Group C units to complete the qualification. Group B contains only papermaking units, whereas Group C contains general pulp and paper operations units such as chemical recovery, coating and finishing operations.

Being the highest pulp and paper qualification registered on the QCA, this Level 3 qualification compares with the content of the South African NQF Level 3 and 4 qualifications, but it is clear that the South African qualification provides the learner with more theoretical knowledge and practical competence. The South African NQF Level 4 qualification also provides the learner with the opportunity to progress to tertiary education.

Summary:

In conclusion, a comparison with similar international qualifications indicates that the focus is the same as those of the benchmark qualifications. Both local and international qualifications place considerable emphasis on safety, quality and problem solving skills and allow the learner to choose from a range of specialisation areas in the paper industry.

The Pulp and Paper Operations qualifications compare well with the best international qualifications and training programmes offered. The compulsory fundamental and technical content incorporated in the qualification will serve to support qualifying learners to make better informed, autonomous decisions within a more compact timeframe than most international learners and will increase transportability of the qualification considerably.

ARTICULATION OPTIONS

This qualification follows a vertical progression from the introductory NQF Level 1, Chemical Operations Qualification and will enable the qualifying learner to progress to a technologist role through the National Certificate in Pulp and Paper Technology, NQF Level 5. In addition, each of these qualifications has elective specialisation areas associated with the different operational areas of a pulp and paper production facility.

Vertical articulation can occur within the pulp and paper industry to the reviewed draft NQF Level 3 National Certificate: Pulp and Paper Operations.

Vertical articulation into related industries can occur with the following registered NQF Level 3 qualifications:

- Process Plant Operationn, NQF Level 3.
- ID 58537: National Certificate Chemical Operations, NQF Level 3.
- National Certificate Pulp and paper hygiene products manufacturing, NQF Level 3.

The expertise obtained through these qualifications will also enable qualifying learners to progress horizontally to obtain other process related qualifications within the pulp and paper, chemical and proposed secondary agriculture industries.

Horizontal articulation can occur with the following registered NQF Level 2 qualifications:

- ID 58515: Chemical Operations, NQF Level 2.
- National Certificate: Pulp and paper hygiene products manufacturing, NQF Level 2.

MODERATION OPTIONS

• Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant ETQA.

- Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.
- Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQAs policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQAs (including professional bodies); and in terms of the moderation guideline detailed immediately below.
- Moderation should also encompass achievement of the competence described both in individual unit standards, exit level outcomes as well as the integrated competence described in the qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

In order to assess this qualification, the assessor needs:

- Assessors to meet the requirements of the generic assessor standards.
- Competence against the unit standard "Conduct outcomes-based assessments".
- Detailed documentary proof of educational qualification, practical training undergone, and/or experience gained at an appropriate level in the work concerning pulp and paper operations. This must meet the relevant ETQA policies and guidelines. The subject matter expertise of the assessor can be established through the recognition of prior learning.
- Registration with, or recognition by, the relevant ETQA as specified through an appropriate memorandum of understanding.

NOTES

This qualification replaces qualification 35941, "National Certificate: Pulp and paper Manufacturing", Level 2, 141 credits.

Range statements:

This qualification addresses the knowledge and competencies required by learners in the pulp and paper industries.

Knowledge relating to the pulp and paper processing industries includes process specific technology, communication, mathematics, applied science, and SHEQ.

This qualification may be applicable to other processing operations. This is subject to its acceptance by appropriate subject matter experts.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119463	Access and use information from texts	Level 2	5
Fundamental	9009	Apply basic knowledge of statistics and probability to influence the use of data and procedures in order to investigate life related problems	Level 2	3
Fundamental	7480	Demonstrate understanding of rational and irrational numbers and number systems	Level 2	3
Fundamental	9008	Identify, describe, compare, classify, explore shape and motion in 2-and 3-dimensional shapes in different contexts	Level 2	3
Fundamental	119454	Maintain and adapt oral/signed communication	Level 2	5
Fundamental	119460	Use language and communication in occupational learning programmes	Level 2	5
Fundamental	7469	Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 2	2
Fundamental	9007	Work with a range of patterns and functions and solve problems	Level 2	5
Fundamental	119456	Write/present for a defined context	Level 2	5

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Core	244076	Apply elementary statistical process control principles	Level 2	6
Core	116520	Apply safety, health and environmental principles and procedures in a workplace	Level 2	2
Core	244080	Apply standard operating procedures in a process environment	Level 2	10
Core	246612	Demonstrate an understanding of quality principles used in the manufacturing of pulp and paper products	Level 2	4
Core	244078	Demonstrate understanding of a work permit system	Level 2	3
Core	244072	Demonstrate understanding of heat transfer equipment	Level 2	10
Core	244074	Demonstrate understanding of liquid-solid and solid-solid separation processes	Level 2	10
Core	246621	Demonstrate understanding of pulp and paper manufacturing processes	Level 2	10
Core	244075	Maintain the quality of products in a production environment	Level 2	5
Core	244082	Monitor plant and equipment in a process environment	Level 2	10
Core	244079	Respond to emergencies in a process environment	Level 2	3
Core	244083	Solve operating problems using relevant technologies	Level 2	5
Elective	110075	Apply basic fire fighting techniques	Level 1	3
Elective	115188	Apply environmental protection procedures	Level 2	4
Elective	244071	Apply sampling theory and practice	Level 2	5
Elective	246619	Classify secondary fibre as per the South African Grade Definition	Level 2	4
Elective	114639	Control waste or effluent water in a manufacturing environment	Level 2	4
Elective	244605	Demonstrate ability to participate effectively in a team or group	Level 2	2
Elective	116935	Enhance, edit and organise electronic messages using a Graphical User Interface (GUI)-based messaging application	Level 2	2
Elective	246613	Handle and store bark for further processing	Level 2	3
Elective	244365	Lift and move material and equipment by means of a forklift	Level 2	3
Elective	9268	Manage basic personal finance	Level 2	6
Elective	110040	Manufacture cores for the pulp and paper industry	Level 2	8
Elective	116235	Operate a pendant controlled overhead crane	Level 2	5
Elective	246620	Prepare and supply bagasse	Level 2	4
Elective	246624	Produce bales of secondary fibre using a baling machine	Level 2	3
Elective	246618	Produce cut cores for the pulp and paper industry	Level 2	3
Elective	246608	Produce embossed paper, board or tissue	Level 2	4
Elective	246615	Produce laminated paper or board	Level 2	8
Elective	246610	Produce wrapped finished paper, board or tissue products	Level 2	4
Elective	246616	Receive and store logs in a woodyard	Level 2	4
Elective	244073	Receive, handle and store hazardous chemicals safely	Level 2	5
Elective	9965	Render basic first aid	Level 2	3
Elective	116256	Sling and communicate during crane operations	Level 2	4
Elective	116937	Use a Graphical User Interface (GUI)-based spreadsheet application to create and edit spreadsheets	Level 2	4
Elective	116931	Use a Graphical User Interface (GUI)-based web-browser to search the Internet	Level 2	4
Elective	117924	Use a Graphical User Interface (GUI)-based word processor to format documents	Level 2	5



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Produce embossed paper, board or tissue**

SAQA US ID	UNIT STANDARD TITLE		
246608	Produce embossed paper, board or tissue		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

SPECIFIC OUTCOME 1

Explain the fundamental principles of the production of embossed paper, board or tissue.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the paper, board or tissue embossing process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce wrapped finished paper, board or tissue products

SAQA US ID	UNIT STANDARD TITLE		
246610	Produce wrapped finished paper, board or tissue products		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

SPECIFIC OUTCOME 1

Explain the fundamental principles of the production of wrapped paper, board or tissue.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the paper, board or tissue wrapping process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of quality principles used in the manufacturing of pulp and paper products

SAQA US ID	UNIT STANDARD TITLE		
246612	Demonstrate an understanding of quality principles used in the manufacturing of pulp and paper products		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Manufacturing and Assembly	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

SPECIFIC OUTCOME 1

Define the terms quality, quality assurance, quality control and quality management.

SPECIFIC OUTCOME 2

Explain the requirements and processes used to ensure effective quality control.

SPECIFIC OUTCOME 3

Describe the factors that affect product quality.

SPECIFIC OUTCOME 4

Demonstrate an understanding of the consequences of poor quality control.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Handle and store bark for further processing

SAQA US ID	UNIT STANDARD TITLE		
246613	Handle and store bark for further processing		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

SPECIFIC OUTCOME 1

Explain the fundamental principles of the handling and storage of bark.

SPECIFIC OUTCOME 2

Explain the quality requirements of the bark received.

SPECIFIC OUTCOME 3

Assess the quality of bark received.

SPECIFIC OUTCOME 4

Monitor and control the handling and storage of bark.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce laminated paper or board

SAQA USSID	UNIT STANDARD TITLE		
246615	Produce laminated paper or board		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	8

SPECIFIC OUTCOME 1

Explain the fundamental principles of the production of laminated paper or board.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the paper or board laminating process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Receive and store logs in a woodyard**

SAQA US ID	UNIT STANDARD TITLE		
246616	Receive and store logs in a woodyard		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

SPECIFIC OUTCOME 1

Explain the fundamental principles of log receipt and storage.

SPECIFIC OUTCOME 2

Explain the quality requirements of the logs received.

SPECIFIC OUTCOME 3

Assess the quality of logs received.

SPECIFIC OUTCOME 4

Monitor and control log receiving and storage.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Produce cut cores for the pulp and paper industry***

SAQA US ID	UNIT STANDARD TITLE		
246618	Produce cut cores for the pulp and paper industry		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

SPECIFIC OUTCOME 1

Explain the fundamental principles of the manufacturing of cores.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the core manufacturing process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Classify secondary fibre as per the South African Grade Definition**

SAQA US ID	UNIT STANDARD TITLE		
246619	Classify secondary fibre as per the South African Grade Definition		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

SPECIFIC OUTCOME 1

Explain fundamental secondary fibre classification principles.

SPECIFIC OUTCOME 2

Classify secondary fibre according to the South African Standard Grade Definition.

SPECIFIC OUTCOME 3

Sort secondary fibre according to the South African Standard Grade Definition.

SPECIFIC OUTCOME 4

Adhere to administrative and housekeeping requirements in a secondary fibre receipt and storage area.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Prepare and supply bagasse**

SAQA US ID	UNIT STANDARD TITLE		
246620	Prepare and supply bagasse		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

SPECIFIC OUTCOME 1

Explain bagasse preparation and supply principles.

SPECIFIC OUTCOME 2

Explain the quality requirements of bagasse raw materials.

SPECIFIC OUTCOME 3

Assess the quality of bagasse raw materials.

SPECIFIC OUTCOME 4

Monitor and control the bagasse preparation and supply process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate understanding of pulp and paper manufacturing processes

SAQA US ID	UNIT STANDARD TITLE		
246621	Demonstrate understanding of pulp and paper manufacturing processes		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	10

SPECIFIC OUTCOME 1

Explain the basic properties and uses of raw materials.

SPECIFIC OUTCOME 2

Explain raw material handling and storage operations.

SPECIFIC OUTCOME 3

Explain pulping operations.

SPECIFIC OUTCOME 4

Explain stock preparation operations.

SPECIFIC OUTCOME 5

Explain wet and dry end operations.

SPECIFIC OUTCOME 6

Explain finishing operations.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce bales of secondary fibre using a baling machine

SAQA US ID	UNIT STANDARD TITLE		
246624	Produce bales of secondary fibre using a baling machine		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	3

SPECIFIC OUTCOME 1

Explain the fundamental principles of the baling process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the baling process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59038	National Certificate: Pulp and Paper Operations	Level 2	Draft - Prep for P Comment	

No. 925

5 October 2007

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Pulp and Paper

registered by Organising Field 06 – Manufacturing, Engineering and Technology, publishes the following Qualification and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification and Unit Standards. The full Qualification and Unit Standards can be accessed via the SAQA web-site at www.saqqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later than 5 November 2007**. All correspondence should be marked **Standards Setting – Pulp and Paper** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. D. Mphuthing

Postnet Suite 248


Private Bag X06

Waterkloof

0145

or faxed to 012-4831-5144

e-mail: dmpthuthing@saqa.org.za


DR S/BHIKHA

DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

PP



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

National Certificate: Pulp and Paper Operations

SAQA QUAL ID	QUALIFICATION TITLE		
59039	National Certificate: Pulp and Paper Operations		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	130	Level 3	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

This qualification is used to address the training needs of learners wishing to progress beyond NQF Level 2 in pulp and paper operations. This competence provides the foundation needed to take responsibility for a significant process in the pulp and paper manufacturing industry. It also provides the basis upon which further related learning and career development can take place.

Qualifying learners will:

- Apply problem solving strategies in a pulp and paper processing environment
- Apply safety and environmental protection procedures in the workplace.
- Monitor and control pulp and paper operations in a range of specialised contexts.
- Maintain quality in a pulp and paper processing environment.

Social development and economic transformation are enhanced through efficient task performance, and career development and personal job satisfaction of processing personnel are facilitated through the learning process used to achieve the competency specified.

This qualification will contribute to the full development of the learner within the pulp and paper industry by providing recognition, further mobility and transportability within the field. The skills, knowledge and understanding demonstrated within this qualification are essential for social and economic transformation and contribute to the progression and economic growth within the pulp and paper processing and maintenance industry.

Rationale:

This qualification replaces the National Certificate: Pulp and Paper Woodyard Operations NQF Level 3 (ID 35939).

This qualification is the third in a learning pathway for people working in the pulp and paper processing industry who need to progress beyond NQF Level 2 in Pulp and Paper Operations. The NQF Level 2, 3, and 4 qualifications in Pulp and Paper Operations are aimed at the learner who wants to gain competence in the skills needed for pulp and paper manufacturing operations in a pulp and paper mill.

The N.C. Pulp and Paper Operations NQF Level 3 allows the learner a choice of specialisation areas in the pulp and paper manufacturing industry. This competence provides the foundation needed to progress in the pulp and paper industry. Through the employment of competent personnel, employers and the industry have confidence that this critical work in the industry is efficiently carried out.

Typical learners are operating personnel working in a chemical or a pulp and paper processing plant. The pulp and paper industry is well established in South Africa and its success is dependant upon the efficient production of products. Achievement of this objective is largely dependant upon the competence, recognised by this qualification, of the people who operate processing equipment. An adequate number of people with these skills are needed to ensure that the pulp and paper production units in South Africa operate productively.

RECOGNIZE PREVIOUS LEARNING?

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LEARNING ASSUMED IN PLACE

This qualification has been designed as the third in a series of four qualifications for pulp and paper operations in the pulp and paper processing and related manufacturing industry.

It is assumed that learners are already competent in:

- National Certificate: Pulp and Paper Operations NQF Level 2 or equivalent.
- Communication and mathematical literacy at NQF Level 2.

Recognition of Prior Learning:

Recognition of prior learning must be carried out in accordance with the policy and rules specified and used by the ETQA responsible for evaluation of people seeking RPL for a part of the whole qualification.

Access to the Qualification:

Access is open to anyone with access to learning opportunities and work experience on an appropriate selection of systems. The learning assumed to be in place is essential to the learning specified in this qualification. If the learner is not yet competent in this regard the shortfalls must be addressed prior to commencing with learning specified in this qualification. This is necessary to ensure the safety of the learner, co-workers, the work process and the environment.

Access for learners with disabilities is dependant on the:

- Type and severity of the disability.
- Nature of the operational processes and requirements of the equipment.

QUALIFICATION RULES

In the compulsory Fundamental Component of the qualification, a learner must demonstrate his/her competence in the 20 credits in the field of Communication plus 16 credits in the field of Mathematics.

The unit standards in the compulsory Core Component of the qualification reflect the skills and competencies needed for building expertise in the pulp and paper manufacturing field. In the Core Component, the learner must demonstrate his/her competence in the total of 35 credits.

The Elective component of the qualification is made up of the following three sections:

Pulp and paper electives: Each learner is required to select a minimum of 10 credits from this section - although more credits may be chosen from this section.

Pulp and paper electives: Select a minimum of 10 credits:

NLRD ID; Title; Level; Credits:

- ID 246647: Produce and store wood chips; Level 3; 6 Credits.
- ID 246642: Bleach pulp for the production of paper, board or tissue; Level 3; 15 Credits.
- ID 246635: Generate chlorine dioxide for pulp bleaching; Level 3; 15 Credits.
- ID 246643: Treat pulp suspensions using an oxygen delignification process; Level 3; 10 Credits.
- ID 246645: Produce mechanical pulp; Level 3; 12 Credits.
- ID 246648: Remove spent liquor contaminants from pulp; Level 3; 8 Credits.
- ID 246628: Produce calcium bisulphite cooking liquor using a liquor preparation plant; Level 3; 10 Credits.
- ID 246644: Increase pulping spent liquor solids using an evaporation process; Level 3; 12 Credits.
- ID 246641: Generate white liquor using a causticizing process; Level 3; 10 Credits.
- ID 246640: Coat paper or board using a coating machine; Level 3; 10 Credits.
- ID 246632: Prepare coating slurry to coat paper or board products; Level 3; 10 Credits.
- ID 246625: Prepare and provide a continuous supply of stock to the forming section of a paper, board or tissue machine; Level 3; 2 Credits.
- ID 246638: Dry and reel formed paper, board or tissue; Level 3; 15 Credits.
- ID 246646: Produce paper, board or tissue reels using a winder or rewinder; Level 3; 10 Credits.
- ID 246628: Produce cut/slit sheets of paper, board, pulp or tissue; Level 3; 6 Credits.
- ID 246629: Debark logs using a drum debarker; Level 3; 6 Credits.
- ID 246651: Prepare and supply washed and depithed bagasse; Level 3; 6 Credits.
- ID 246650: Produce crude tall oil by the acidification of Kraft soap skimmings; Level 3; 6 Credits.
- ID 246639: Produce unslaked lime using a rotary lime kiln; Level 3; 10 Credits.
- ID 246631: Prepare chemical additives used in the pulp and paper industry; Level 3; 4 Credits.
- ID 246652: Produce supercalendered paper or board; Level 3; 6 Credits.
- ID 246649: Demonstrate understanding of the water treatment and effluent treatment processes in the pulp and paper industry; Level 3; 6 Credits.

Product testing electives: Each learner is required to select at least one Unit standard from this section (a minimum of 4 credits - although more credits may be selected).

Pulp and paper tests: Select at least 1 Unit standard:

NLRD ID; Title; Level; Credits:

- ID 246636: Perform visual inspection tests to identify paper defects; Level 3; 4 Credits.
- ID 246634: Conduct physical tests on paper, board or tissue; Level 3; 5 Credits.
- ID 246637: Monitor and control product parameters in a manufacturing environment; Level 2; 5 Credits.
- ID 246633: Perform physical and chemical tests on pulp and paper chemicals; Level 3; 4 Credits.
- ID 246627: Perform physical and chemical tests on pulp; Level 3; 4 Credits.
- ID 243630: Perform physical and chemical tests on raw materials; Level 3; 4 Credits.

Electives: The qualification is completed by selecting sufficient credits from this section to make up 130 credits.

Electives:

NLRD ID; Title; Level; Credits:

- ID 244088: Act as a safety watcher during performance of maintenance activities; Level 3; 3 Credits.
- ID 244098: Perform statistical process control in a process environment; Level 3; 4 Credits.
- ID 244090: Demonstrate understanding of the principles of kinematics in physics; Level 3; 6 Credits.
- ID 244091: Identify and interpret instrument control loops; Level 3; 8 Credits.
- ID 244093: Read and interpret process and instrument diagrams; Level 3; 4 Credits.
- ID 244095: Dismantle, assemble and install basic components in a process environment; Level 3; 6 Credits.
- ID 244094: Perform and support maintenance functions; Level 3; 5 Credits.
- ID 10170: Demonstrate understanding of employment relations in an organisation; Level 3; 3 Credits.
- ID 119078: Use a GUI based word processor to enhance a document through tables and columns; Level 3; 5 Credits.
- ID 116940: Use a GUI based spreadsheet application to solve a given problem; Level 3; 6 Credits.
- ID 116936: Use a GUI based database application to work with simple databases; Level 3; 3 Credits.
- ID 114250: Understand the operating principles, processes and variables associated with the drying of paper, board or tissue products; Level 4; 10 Credits.
- ID 114271: Understand the operating principles, processes and variables associated with the coating of paper or board; Level 4; 10 Credits.
- ID 114269: Understand the operating principles, processes and variables in stock preparation in the pulp and paper industry; Level 4; 10 Credits.
- ID 114253: Understand the printing processes and quality requirements for the end use of manufactured paper products; Level 4; 10 Credits.
- ID 114266: Understand the processes and the variables in mechanical pulping; Level 4; 10 Credits.
- ID 114270: Understand the operating principles, processes and variables associated with pulp bleaching; Level 4; 10 Credits.
- ID 110038: Understand the process and variables in woodyard operations; Level 4; 8 Credits.

EXIT LEVEL OUTCOMES

1. Apply problems solving strategies in a pulp and paper processing environment.
1. Apply problems solving strategies in a pulp and paper processing environment.
2. Apply safety and environmental protection procedures in the workplace.
2. Apply safety and environmental protection procedures in the workplace.
3. Monitor and control pulp and paper operations in a range of specialised contexts.
3. Monitor and control pulp and paper operations in a range of specialised contexts.
4. Maintain quality in a pulp and paper processing environment.
4. Maintain quality in a pulp and paper processing environment

Critical Cross-Field Outcomes

Critical Cross-Field Outcomes

Each critical cross-field outcome was considered in terms of its applicability to each of the specific outcomes for each unit standard. Where it was found to be applicable, the nature of the skills being developed was specified by the working group and accepted as the standard. Critical cross-field outcomes are assessed per unit standards and are part of all exit level outcomes.

Critical cross-field outcomes have been addressed by the exit level outcomes as follows:

Critical cross-field outcomes have been addressed by the exit level outcomes as follows:

Critical cross-field outcomes:

While performing integrated pulp and paper operations, qualifying learners can:

Identify and solve problems in which response displays that responsible decisions, using critical and creative thinking, have been made by:

- Responding to emergencies in a pulp and paper processing environment, Evident in Exit Level Outcome 2.
- Monitoring and controlling quality assurance practices, Evident in Exit Level Outcome 1, 2, 3, 4.
- Applying operating procedures, Evident in Exit Level Outcome 3, 4.
- Controlling variables impacting on operations, Evident in Exit Level Outcome 1, 2, 3, 4.

Work effectively with others as a member of a team, group, organisation or community by:

- Working in a coordinated team during pulp and paper processing operations, Evident in Exit Level Outcome 3.
- Coordinating one's work with that of others in the direct surrounding area, internal and external operations, Evident in Exit Level Outcome 1, 2, 3, 4.

Organise and manage oneself and one's activities responsibly and effectively by:

- Using operating instructions to control process plant conditions, Evident in Exit Level Outcome 3.
- Implementing the steps to solve operating problems in a process plant, Evident in Exit Level Outcome 1, 3.
- Applying quality procedures in a process environment to maintain product quality, Evident in Exit Level Outcome 1, 4.

Collect, analyse, organise and critically evaluate information by:

- Monitoring operational parameters, Evident in Exit Level Outcome 1, 3, 4.
- Collating and sorting product quality data, Evident in Exit Level Outcome 1, 3, 4.
- Monitoring and interpreting product quality data and data obtained from product analysis, Evident in Exit Level Outcome 1, 3, 4.
- Managing records, reports and stock. Evident in Exit Level Outcome 1, 2, 3, 4.

Communicate effectively by using mathematical and/or language skills in the modes of oral and/or written presentations by:

- Recording and interpretation of instrument readings, Evident in Exit Level Outcome 1, 3, 4.
- Preparing and presenting reports. Evident in Exit Level Outcome 1, 3, 4.

Use science and technology effectively and critically, showing responsibility towards the environment and health of others by:

- Working according to health and safety regulations, Evident in Exit Level Outcome 2, 3, 4.
- Controlling technologically advanced production equipment according to operating procedures, Evident in Exit Level Outcome 1, 2, 3, 4.
- Working and interpreting technologically advanced instrumentation and computer systems, Evident in Exit Level Outcome 1, 3, 4.

Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation by:

- **Monitoring and controlling quality assurance practices, Evident in Exit Level Outcome 3, 4.**
- **Adjusting equipment and machinery while taking cognisance of the downstream impact, Evident in Exit Level Outcome 1, 3, 4.**

Contribute to the full personal development of each learner and the social and economic development of the society at large by:

- **Maintaining and applying safety practices in the production environment, Evident in Exit Level Outcome 1, 2, 3, 4.**
- **Maintaining and applying quality practices in the production environment, Evident in Exit Level Outcome 3, 4.**
- **Performing core operating functions, Evident in Exit Level Outcome 3.**

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Specific Outcome 1:

- **Operating problems in a process plant are solved by making use of relevant technologies.**
- **Statistical process control is performed in a process environment.**
- **Instrument control loops are identified and interpreted in accordance with specified requirements.**

Associated Assessment Criteria for Specific Outcome 2:

- **Emergencies in a process environment are responded to in accordance with specified requirements.**
- **Procedures are implemented to maintain the safety, health and environmental integrity of a processing environment.**

Associated Assessment Criteria for Specific Outcome 3:

- **The principles of chemistry and chemical reactions are explained as applicable to a processing environment.**
- **The fundamental principles of screening and cleaning operations are explained in terms of pulp and paper operations.**
- **Operating instructions are used to control process plant conditions in accordance with workplace procedures.**
- **Plant is monitored in a process environment in accordance with specified requirements.**

Associated Assessment Criteria for Specific Outcome 4:

- **Pulp and paper tests are performed in accordance with workplace requirements.**
- **Product parameters are monitored and controlled in the pulp and paper environment.**
- **The quality of products is maintained in a production environment.**
- **Corrective action is taken to ensure quality of materials and products.**

Integrated Assessment:

The applied competence (practical, foundational and reflexive competencies) of this qualification will be achieved if a candidate is able to achieve all the exit level outcomes of this qualification.

Appropriate methods and tools must be used to assess practical, foundational and reflexive competence of the learner in all the exit level outcomes listed above, as well as to determine a learner's ability to solve problems, work in a team, organise him/herself, use applied science, and understand the implications of actions and reactions in the world as a set of related

systems. Such an assessment process will determine development of the whole person, and the integration of applied knowledge and skills.

Assessors should develop, conduct, and ensure integration of, assessment by making use of a range of formative and summative assessment methods against the unit standards that make up the qualification. Combinations of applied, foundational and reflective competencies, including critical cross-field outcomes, should be assessed wherever possible.

Moderators should ensure that assessment is valid, consistent and integrated into work or learning, and that there is sufficient and authenticated evidence of learner competence against the whole qualification.

INTERNATIONAL COMPARABILITY

An extensive international comparability comparison was made including Australia, New Zealand, Britain, Scotland, Canada, the USA, Sweden, Finland, Germany and relevant African countries.

USA, Canada, Scandinavia and Germany:

Despite the fact that the pulp and paper industry is very well-developed in all the countries in the extreme northern areas of the world, most operators are still trained on the job with some short courses offered by equipment suppliers.

In the USA staff is mostly trained on the specific machines they operate at the time of establishing a new mill. TAPPI (a technical association for the pulp, paper and converting industry) offers a wide range of short, technical courses for operating staff. A number of pulp and paper related university degrees are also offered in the USA.

Canada has the largest pulp operations in the world, but has no formal national qualifications registered. As is the international trend, most operator training is done on the job. However, a number of colleges offer a Pulp and Paper Operations Certificate (post school) training course. The courses generally train the learners from 7 to 9 months in general pulp and paper mill operations for entry level machine and utility operators. As in the USA, pulp and paper related degrees are offered by local universities.

The Scandinavian pulp and paper industry (including Sweden, Norway and Finland) follows the same trend. Most training is done on the job, with no vocational training leading to a qualification. As in the USA there are a variety of pulp and paper degrees on offer at universities in all three these countries.

Three year Paper Technology Diplomas are offered by several German Universities. Although these diplomas have a strong workplace emphasis, they are comparable to South African diplomas rather than vocational training qualifications. Subject content is similar to that contained in the technical part of the South African qualification, namely: industry background, machine operations and components, maintenance functions, computer skills with a technical project to complete the diploma.

Africa:

African countries with manufacturing facilities (including SADC countries) were searched for applicable qualifications or training programmes, but no relevant qualifications are offered in any of these countries. Similar to international companies, the majority of training is provided by equipment suppliers with three to five day short training courses. The only pulp and paper facility in the SADC outside South Africa is in Swaziland - learners from this facility will be trained according to the South African qualification.

New Zealand:

A comparison with the NZQA was included, because it is an educational structure comparable to the NQF. An internet search of the NZQA revealed three registered qualifications (National Certificates) ranging from Levels 2 to 4 in Pulp and Paper Manufacturing.

The New Zealand "National Certificate in Pulp and Paper Manufacturing (Level 2)" is an introduction to pulp and paper operations containing a compulsory core component consisting of units standards in communication, teamwork, employment relations, health, safety, quality, environmental protection and manufacturing process knowledge. The learner has to choose 10 credits from Elective Group A which contains unit standards dealing with specific pulp and paper industry skills and 19 credits from Elective Group B which is made up of general unit standards such as workplace safety, distribution, business administration and computer skills.

The compulsory core sections of the National Certificates in Pulp and Paper Manufacturing Levels 3 and 4 are common so that people wishing to progress from the NQF Level 3 qualification to the Level 4 qualification have a common grounding in the principles of pulp and paper manufacturing. This core component consist of unit standards with a technical focus such as pumps and valves, chemistry and physics and the fundamentals of process control systems make up.

For competence in the "National Certificate in Pulp and Paper Manufacturing (Level 3)" the learner needs to prove competence in the 28 credits core unit standards, 35 credits from pulp and paper specialisation areas and 27 general electives. The general elective sections of both Level 3 and 4 qualifications also provide recognition for a range of manufacturing and generic industry skills; and cover areas such as workplace safety, distribution, business administration, and communications.

Just as in the South African NQF Level 4 qualification, learners completing the "National Certificate in Pulp and Paper Manufacturing (Level 4)" specialise in either pulpmaking, papermaking or chemical recovery. The learner needs to prove competence in a total of 120 credits which consist of 28 credits core unit standards and 35 credits specialisation electives. If all 28 credits for the core were obtained in the level 3 qualification these credits are reflected here again.

The South African qualifications compare very well with the New Zealand qualifications, but the fact that the South African qualifications have a fundamental component of communication and mathematical unit standards is advantageous for the South African learner.

Australia:

An internet search of the AQF revealed that the following four qualifications are registered on the AQF:

- "Certificate I in Pulp and Paper Manufacturing".
- "Certificate II in Pulp and Paper Manufacturing".
- "Certificate III in Pulp and Paper Manufacturing".
- "Certificate IV in Pulp and Paper Manufacturing".

A comparison with these qualifications was included because the AQF is an educational structure comparable to the NQF.

The new Australian "Certificate I in Pulp and Paper Manufacturing" contains only a compulsory core consisting of five units in communication, safety, quality and the use of hand held tools which all have to be achieved. This qualification is not compulsory for entry to the pulp and paper qualifications as the majority of trainees enter the industry at Certificate II level.

The Level 2 to 4 qualifications all have a compulsory core consisting mainly of communication, safety and quality. The Level 3 and 4 qualifications also include a compulsory unit on problem solving.

From Level 2 onwards the learner has to choose specialisation units from the following range of specialisation areas: Primary resources, pulping operations, chemical recovery and waste paper handling, waste paper operations, stock preparation, wet end operations, dry end operations, paper coating and finishing and converting. The level 2 and 3 qualifications are completed with a choice of two elective units. The Level 2 and 3 elective component consist of a range of safety, emergencies, first aid, training, cramage and specialist technical skills Unit Standards.

The new Australian "Certificate IV in Pulp and Paper Manufacturing" has a compulsory core consisting of communication, productivity calculations, OHS policy and procedures, quality and advanced problem solving. This learner already specialises in one specific area and has to make a choice of one specialisation unit from the following range of specialisation areas: Resources, pulping operations, chemical recovery and paper manufacture. The qualification is completed with a choice of three elective units ranging from leadership, workplace relationships, customer care, training and assessment, to cramage and sampling units.

The South African qualification includes similar core qualification structures and progressions from NQF Level 2 to NQF Level 4 and also uses separate qualifications to address pulp and paper production and pulp and paper hygiene products manufacturing. The main difference is that the Australian qualification requires of the learner to choose a specialisation area in Level 2, whereas the South African qualification offers the learner the opportunity to gain an overview of all the pulp and paper processes on Level 2 before choosing a specialisation area in Level 3.

Britain:

A comparison with the British qualification was included, because the British pulp and paper industry is very well developed and the NVQ is an educational structure comparable to the NQF. An internet search of the British NVQ and the Scottish SVQ revealed the following level 2 and 3 qualifications:

- The PAAWQSET Level 2 Certificate in Paper Technology.
- The PAAWQSET Level 3 Certificate in Paper Technology.

The South African NQF Level 2 qualification compares very well with the British Level 2 qualification which is made up of six compulsory units in Health and Safety, quality, raw materials, papermaking processes, plant services and process control. The main difference is that the British qualifications contain no fundamental communication and mathematical units.

The PAAWQSET Level 3 Certificate in Paper Technology has a compulsory core containing units on Health and Safety, quality, teamwork and problem solving. The learner has to choose between Group B units and Group C units to complete the qualification. Group B contains only papermaking units, whereas Group C contains general pulp and paper operations units such as chemical recovery, coating and finishing operations.

Being the highest pulp and paper qualification registered on the QCA, this level 3 qualification compares with the content of the South African NQF Level 3 and 4 qualifications, but it is clear that the South African qualification provides the learner with more theoretical knowledge and practical competence. The South African NQF Level 4 qualification also provides the learner with the opportunity to progress to tertiary education.

Summary:

In conclusion, a comparison with similar international qualifications indicates that the focus is the same as those of the benchmark qualifications. Both local and international qualifications place considerable emphasis on safety, quality and problem solving skills and allow the learner to choose from a range of specialisation areas in the paper industry.

The Pulp and Paper Operations qualifications compare well with the best international qualifications and training programmes offered. The compulsory fundamental and technical content incorporated in the qualification will serve to support qualifying learners to make better informed, autonomous decisions within a more compact timeframe than most international learners and will increase transportability of the qualification considerably.

ARTICULATION OPTIONS

This qualification follows a vertical progression from the introductory NQF Level 1, Chemical Operations Qualification and will enable the qualifying learner to progress to a technologist role through the National Certificate in Pulp and Paper Technology, NQF Level 5. In addition, each of these qualifications have elective specialisation areas associated with the different operational areas of a pulp and paper production facility.

Vertical articulation can occur within the pulp and paper industry to the reviewed draft NQF Level 4 F.E.T.C: Pulp and Paper Operations. Vertical articulation into related industries can occur with the following registered NQF Level 4 qualifications:

- ID 48915: Further Education and Training Certificate: Manufacturing and Assembly Operations Supervision, NQF Level 4.
- ID 48919: Further Education and Training Certificate: Measurement, Control and Instrumentation, NQF Level 4.
- ID 58538: Further Education and Training Certificate: Chemical Operations, NQF Level 4.
- New draft: Further Education and Training Certificate: Pulp and paper hygiene products manufacturing, NQF Level 4.

The expertise obtained through these qualifications will also enable qualifying learners to progress horizontally to obtain other process related qualifications within the pulp and paper, chemical and proposed secondary agriculture industries. Horizontal articulation can occur with the following registered NQF Level 3 qualifications:

- ID 22940: Certificate: Process Plant Operation, NQF Level 3.
- ID 58537: National Certificate: Chemical Operations, NQF Level 3.
- New draft: National Certificate: Pulp and paper hygiene products manufacturing, NQF Level 3.

MODERATION OPTIONS

- Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant ETQA.
- Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.
- Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQA's policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQAs (including professional bodies); and in terms of the moderation guideline detailed immediately below.
- Moderation should also encompass achievement of the competence described both in individual unit standards, exit level outcomes as well as the integrated competence described in the qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

In order to assess this qualification, the assessor needs:

- Assessors to meet the requirements of the generic assessor standards.
- Competence against the unit standard "Conduct outcomes-based assessments".
- Detailed documentary proof of educational qualification, practical training undergone, and/or experience gained at an appropriate level in the work concerning pulp and paper operations. This must meet the relevant ETQA policies and guidelines. The subject matter expertise of the assessor can be established through the recognition of prior learning.
- Registration with, or recognition by, the relevant ETQA as specified through an appropriate memorandum of understanding.

NOTES

This qualification replaces qualification 35939, "National Certificate: Pulp and Paper Woodyard Operations", Level 3, 120 credits.

Range statements:

- This qualification addresses the knowledge and competencies required by learners in the pulp and paper industries.
- Knowledge relating to the pulp and paper processing industries includes process specific technology, communication, mathematics, applied science, and SHEQ.
- This qualification may be applicable to other processing operations. This is subject to its acceptance by appropriate subject matter experts.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	2
Fundamental	9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	4
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	9012	Investigate life and work related problems using data and probabilities	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Core	244241	Apply knowledge of chemical reactions in a processing environment	Level 3	6
Core	244086	Apply quality procedures in a process plant	Level 3	6
Core	244108	Apply safety, health and environment protection procedures in a process plant	Level 3	6
Core	244085	Respond to emergencies in a process environment	Level 3	6
Core	244087	Solve operating problems in a process plant	Level 3	5
Core	246626	Understand the fundamental principles of screening and cleaning operations	Level 3	6
Elective	246637	Monitor and control product parameters in a manufacturing environment	Level 2	5
Elective	246651	Prepare and supply washed and depithed bagasse	Level 2	4
Elective	244088	Act as the Safety Watcher during the performance of maintenance activities	Level 3	3
Elective	246642	Bleach pulp for the production of paper, board or tissue products	Level 3	15
Elective	246640	Coat paper or board using a coating machine	Level 3	10
Elective	246634	Conduct physical tests on paper, board or tissue	Level 3	5
Elective	246628	Cut/slit sheets of paper, board, pulp or tissue	Level 3	6
Elective	246629	Debark logs using a drum debarker	Level 3	6

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	10170	Demonstrate understanding of employment relations in an organisation	Level 3	3
Elective	244090	Demonstrate understanding of the principles of kinematics in physics	Level 3	6
Elective	246649	Demonstrate understanding of the water and effluent treatment processes in the pulp and paper industry	Level 3	6
Elective	244095	Dismantle, assemble and install basic components in a process environment	Level 3	6
Elective	246638	Dry and reel formed paper, board or tissue	Level 3	15
Elective	246635	Generate chlorine dioxide for pulp bleaching	Level 3	15
Elective	246641	Generate white liquor	Level 3	10
Elective	244091	Identify and interpret instrument control loops	Level 3	8
Elective	246644	Increase pulping spent liquor solids	Level 3	12
Elective	244094	Perform and support maintenance functions	Level 3	5
Elective	246627	Perform physical and chemical tests on pulp	Level 3	4
Elective	246633	Perform physical and chemical tests on pulp and paper chemicals	Level 3	4
Elective	246630	Perform physical and chemical tests on raw materials	Level 3	4
Elective	246614	Perform statistical process control in a process environment	Level 3	4
Elective	246636	Perform visual inspection checks to identify paper defects	Level 3	4
Elective	246631	Prepare chemical additives	Level 3	4
Elective	246647	Produce and store wood chips	Level 3	6
Elective	246623	Produce calcium bisulphite cooking liquor for the production of pulp	Level 3	10
Elective	246632	Produce coating slurry	Level 3	10
Elective	246650	Produce crude tall oil by the acidification of Kraft soap skimmings	Level 3	6
Elective	246645	Produce mechanical pulp	Level 3	12
Elective	246646	Produce paper, board or tissue reels using a winder or rewinder	Level 3	10
Elective	246625	Produce papermaking stock	Level 3	12
Elective	246652	Produce supercalendered paper or board	Level 3	6
Elective	246639	Produce unslaked lime using a rotary lime kiln	Level 3	10
Elective	244093	Read and interpret process and instrumentation diagrams	Level 3	4
Elective	246648	Remove spent liquor contaminants from pulp	Level 3	8
Elective	246643	Treat pulp suspension using an oxygen delignification process	Level 3	10
Elective	119078	Use a GUI-based word processor to enhance a document through the use of tables and columns	Level 3	5
Elective	116936	Use a Graphical User Interface (GUI)-based database application to work with simple databases	Level 3	3
Elective	116940	Use a Graphical User Interface (GUI)-based spreadsheet application to solve a given problem	Level 3	6
Elective	114270	Understand the operating principles, processes and variables associated with pulp bleaching	Level 4	10
Elective	114250	Understand the operating principles, processes and variables associated with the drying of paper, board or tissue products	Level 4	10
Elective	114271	Understand the operating principles, processes and variables associated with the coating of paper or board	Level 4	10
Elective	114269	Understand the operating principles, processes and variables in stock preparation in the pulp and paper industry	Level 4	10
Elective	114253	Understand the printing processes and quality requirements for the end use of manufactured paper products	Level 4	10
Elective	110038	Understand the process and variables in woodyard operations	Level 4	10
Elective	114266	Understand the processes and variables in mechanical pulping	Level 4	10



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Produce calcium bisulphite cooking liquor for the production of pulp**

SAQA US ID	UNIT STANDARD TITLE		
246623	Produce calcium bisulphite cooking liquor for the production of pulp		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	10

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the cooking liquor preparation process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the cooking liquor preparation process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce papermaking stock

SAQA US ID	UNIT STANDARD TITLE		
246625	Produce papermaking stock		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
FIELD			SUBFIELD
6 - Manufacturing, Engineering and Technology			Engineering and Related Design
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	12

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the stock preparation process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the stock preparation process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Understand the fundamental principles of screening and cleaning operations***

SAQA US ID	UNIT STANDARD TITLE		
246626	Understand the fundamental principles of screening and cleaning operations		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

SPECIFIC OUTCOME 1

Discuss typical contraries found in different pulp and paper applications.

SPECIFIC OUTCOME 2

Explain the fundamental operating principles of cleaners (hydrocyclones) and cleaning systems.

SPECIFIC OUTCOME 3

Explain the fundamental operating principles of screens and screening systems.

SPECIFIC OUTCOME 4

Select the type of screen or cleaner to use for different process applications.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform physical and chemical tests on pulp

SAQA USSID	UNIT STANDARD TITLE		
246627	Perform physical and chemical tests on pulp		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to physical and chemical tests carried out on pulp.

SPECIFIC OUTCOME 2

Explain the physical and chemical tests, tools and equipment.

SPECIFIC OUTCOME 3

Perform routine checks on the selected test equipment.

SPECIFIC OUTCOME 4

Perform selected physical and chemical tests on pulp.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Cut/slit sheets of paper, board, pulp or tissue*

SAQA US ID	UNIT STANDARD TITLE		
246628	Cut/slit sheets of paper, board, pulp or tissue		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the cutting/slitting process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the cutting/slitting process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Debark logs using a drum debarker

SAQA US ID	UNIT STANDARD TITLE		
246629	Debark logs using a drum debarker		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the debarking function.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the debarking process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Perform physical and chemical tests on raw materials***

SAQA US ID		UNIT STANDARD TITLE	
246630		Perform physical and chemical tests on raw materials	
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to physical and chemical tests carried out on raw materials.

SPECIFIC OUTCOME 2

Explain the physical and chemical tests, tools and equipment.

SPECIFIC OUTCOME 3

Perform routine checks on the selected test equipment.

SPECIFIC OUTCOME 4

Perform selected physical and chemical tests on raw materials.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Prepare chemical additives**

SAQA US ID	UNIT STANDARD TITLE		
246631	Prepare chemical additives		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the preparation of chemical additives.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the preparation of chemical additives.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce coating slurry

SAQA US ID	UNIT STANDARD TITLE		
246632	Produce coating slurry		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	10

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the production of coating slurry.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the production of coating slurry.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform physical and chemical tests on pulp and paper chemicals

SAQA US ID	UNIT STANDARD TITLE		
246633	Perform physical and chemical tests on pulp and paper chemicals		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to physical and chemical tests carried out on pulp and paper chemicals.

SPECIFIC OUTCOME 2

Explain the physical and chemical tests, tools and equipment.

SPECIFIC OUTCOME 3

Perform routine checks on the selected test equipment.

SPECIFIC OUTCOME 4

Perform selected physical and chemical tests on pulp and paper chemicals.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Conduct physical tests on paper, board or tissue**

SAQA US ID	UNIT STANDARD TITLE		
246634	Conduct physical tests on paper, board or tissue		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

SPECIFIC OUTCOME 1

Explain the fundamental principles of tests carried out on paper, board or tissue.

SPECIFIC OUTCOME 2

Explain the basic procedures applicable to the selected paper, board or tissue tests.

SPECIFIC OUTCOME 3

Perform routine checks using test equipment.

SPECIFIC OUTCOME 4

Select and carry out physical tests on paper, board or tissue.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Generate chlorine dioxide for pulp bleaching**

SAQA US ID	UNIT STANDARD TITLE		
246635	Generate chlorine dioxide for pulp bleaching		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
FIELD			SUBFIELD
6 - Manufacturing, Engineering and Technology			Engineering and Related Design
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	15

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the bleaching process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the bleaching process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Perform visual inspection checks to identify paper defects**

SAQAUSDD	UNIT STANDARD TITLE		
246636	Perform visual inspection checks to identify paper defects		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABETBAND	UNIT STANDARD TYPE	NQFLEVEL	CREDITS
Undefined	Regular	Level 3	4

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to visual checks.

SPECIFIC OUTCOME 2

Identify and discuss paper defects common to the paper industry.

SPECIFIC OUTCOME 3

Identify and discuss paper defects caused by equipment faults.

SPECIFIC OUTCOME 4

Perform tests and record and report data related to inspections.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Monitor and control product parameters in a manufacturing environment

SAQA US ID	UNIT STANDARD TITLE		
246637	Monitor and control product parameters in a manufacturing environment		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	5

SPECIFIC OUTCOME 1

Demonstrate an understanding of monitoring product parameters in a manufacturing environment.

SPECIFIC OUTCOME 2

Assess product suitability by means of measurements, checks and simple tests.

SPECIFIC OUTCOME 3

Plot values and compare these values against maximum/minimum control limits.

SPECIFIC OUTCOME 4

Take corrective action pertaining to measured values, checks and tests.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Dry and reel formed paper, board or tissue*

SAQA US ID	UNIT STANDARD TITLE		
246638	Dry and reel formed paper, board or tissue		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
FIELD			SUBFIELD
6 - Manufacturing, Engineering and Technology			Engineering and Related Design
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	15

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the drying and reeling process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the drying and reeling process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce unslaked lime using a rotary lime kiln

SAQA US ID		UNIT STANDARD TITLE	
246639		Produce unslaked lime using a rotary lime kiln	
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	10

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the production of unslaked lime.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the production of unslaked lime.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Coat paper or board using a coating machine**

SAQA US ID	UNIT STANDARD TITLE		
246640	Coat paper or board using a coating machine		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQP LEVEL	CREDITS
Undefined	Regular	Level 3	10

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the coating process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the coating process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P CoP.Dment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Generate white liquor

SAQA US ID	UNIT STANDARD TITLE		
246641	Generate white liquor		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
FIELD			SUBFIELD
6 - Manufacturing, Engineering and Technology			Engineering and Related Design
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	10

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the causticizing process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the causticizing process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Bleach pulp for the production of paper, board or tissue products***

SAQA US ID	UNIT STANDARD TITLE		
246642	Bleach pulp for the production of paper, board or tissue products		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	15

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the bleaching process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials (unbleached pulp) received.

SPECIFIC OUTCOME 3

Assess raw materials (unbleached pulp) quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the bleaching process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Treat pulp suspension using an oxygen delignification process

SAQA US ID	UNIT STANDARD TITLE		
246643	Treat pulp suspension using an oxygen delignification process		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	10

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the delignification process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials (pulp) received.

SPECIFIC OUTCOME 3

Assess raw materials (pulp) quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the delignification process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Increase pulping spent liquor solids*

SAQA US ID	UNIT STANDARD TITLE		
246644	Increase pulping spent liquor solids		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	12

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the evaporation process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the evaporation process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce mechanical pulp

SAQA US ID	UNIT STANDARD TITLE		
246645	Produce mechanical pulp		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABETBAND	UNIT STANDARD TYPE	NQFILE/BL	CREDITS
Undefined	Regular	Level 3	12

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the mechanical pulping process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials (logs or wood chips) received.

SPECIFIC OUTCOME 3

Assess raw materials (logs or wood chips) quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the mechanical pulping process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Produce paper, board or tissue reels using a winder or rewinder**

SAQA US ID	UNIT STANDARD TITLE		
246646	Produce paper, board or tissue reels using a winder or rewinder		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	10

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the winding/rewinding process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the winding/rewinding process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Produce and store wood chips***

SAQA US ID	UNIT STANDARD TITLE		
246647	Produce and store wood chips		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

SPECIFIC OUTCOME 1

Explain the fundamental principles of the production and storage of wood chips.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the production and storage of wood chips.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Remove spent liquor contaminants from pulp

SAQA US ID	UNIT STANDARD TITLE		
246648	Remove spent liquor contaminants from pulp		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	8

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the process of removing spent liquor contaminants from pulp.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the contaminant removal process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate understanding of the water and effluent treatment processes in the pulp and paper industry

SAQA US ID	UNIT STANDARD TITLE		
246649	Demonstrate understanding of the water and effluent treatment processes in the pulp and paper industry		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABETBAND	UNIT STANDARD TYPE	NQFLEVEL	CREDITS
Undefined	Regular	Level 3	6

SPECIFIC OUTCOME 1

Explain the water requirements for pulp.

SPECIFIC OUTCOME 2

Explain the fundamental principles applicable to the water treatment process.

SPECIFIC OUTCOME 3

Explain the fundamental principles applicable to the effluent treatment process.

SPECIFIC OUTCOME 4

Monitor and control the water treatment process.

SPECIFIC OUTCOME 5

Monitor and control the effluent treatment process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Produce crude tall oil by the acidification of Kraft soap skimmings**

SAQA US ID	UNIT STANDARD TITLE		
246650	Produce crude tall oil by the acidification of Kraft soap skimmings		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the crude tall oil production process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the crude tall oil production process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Prepare and supply washed and depithed bagasse

SAQA US ID	UNIT STANDARD TITLE		
246651	Prepare and supply washed and depithed bagasse		
ORIGINATOR	PROVIDER		
SGB Pulp and Paper			
FIELD	SUBFIELD		
6 - Manufacturing, Engineering and Technology	Engineering and Related Design		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

SPECIFIC OUTCOME 1

Explain washed and depithed bagasse preparation and supply principles.

SPECIFIC OUTCOME 2

Explain and apply procedures related to the quality of bagasse raw materials.

SPECIFIC OUTCOME 3

Assess the quality of bagasse raw materials.

SPECIFIC OUTCOME 4

Monitor and control the bagasse preparation and supply process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Produce supercalendered paper or board**

SAQA US ID	UNIT STANDARD TITLE		
246652	Produce supercalendered paper or board		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
FIELD			SUBFIELD
6 - Manufacturing, Engineering and Technology			Engineering and Related Design
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the supercalendering process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the supercalendering process.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59039	National Certificate: Pulp and Paper Operations	Level 3	Draft - Prep for P Comment	

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Pulp and Paper

registered by Organising Field 06 – Manufacturing, Engineering and Technology, publishes the following Qualification and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification and Unit Standards. The full Qualification and Unit Standards can be accessed via the SAQA web-site at www.saqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later than 5 November 2007**. All correspondence should be marked **Standards Setting – Pulp and Paper** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. D. Mphuthing

Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012-431-5144

e-mail: dmphuthing@saqa.org.za

DR S/ BHIKHA

DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
Further Education and Training Certificate: Pulp and Paper Operations

SAQA QUAL ID	QUALIFICATION TITLE		
59077	Further Education and Training Certificate: Pulp and Paper Operations		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
QUALIFICATION TYPE	FIELD	SUBFIELD	
Further Ed and Training Cert	6 - Manufacturing, Engineering and Technology	Manufacturing and Assembly	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	140	Level 4	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION**Purpose:**

This qualification is used to address the training needs of learners wishing to progress beyond NQF Level 2 in pulp and paper operations. The qualification allows the learner a choice of elective specialisation areas associated with the different operational areas of a pulp and paper production facility. This competence provides the foundation needed to take responsibility for a significant process in the pulp and paper manufacturing industry. It also provides the basis upon which further related learning and career development can take place.

Qualifying learners will:

- Apply problems solving strategies in a pulp and paper processing environment.
- Apply safety and environmental protection procedures in the workplace.
- Monitor and control pulp and paper operations in a range of specialised contexts.
- Maintain quality in a pulp and paper processing environment.

Social development and economic transformation are enhanced through efficient task performance, and career development and personal job satisfaction of processing personnel are facilitated through the learning process used to achieve the competency specified.

This qualification will contribute to the full development of the learner within the pulp and paper industry by providing recognition, further mobility and transportability within the field. The skills, knowledge and understanding demonstrated within this qualification are essential for social and economic transformation and contribute to the progression and economic growth within the pulp and paper processing and maintenance fraternity.

Rationale:

This qualification replaces the following:

- Further Education and Training: Chemical Pulp Manufacturing NQF Level 4 (ID 48643).
- Further Education and Training: Paper, Board or Tissue Manufacturing NQF Level 4 (ID 48644).
- Further Education and Training: Pulp and Paper Chemical Recovery NQF Level 4 (ID 48645).

This is the final qualification in a learning pathway for people working in the pulp and paper processing industry who need to progress beyond NQF Level 2 in Pulp and Paper Operations. The NQF Level 2, 3, and 4 qualifications in Pulp and Paper Operations are aimed at the learner who wants to gain competence in the skills needed for pulp and paper manufacturing operations in a pulp and paper mill.

The N.C. Pulp and Paper Operations NQF Level 4 allows the learner a choice of specialisation areas in the pulp and paper manufacturing industry. This competence provides the foundation needed to progress in the pulp and paper industry. Through the employment of competent personnel, employers and the industry have confidence that this critical work in the industry is efficiently carried out.

Typical learners are operating personnel working in a chemical or a pulp and paper processing plant. The pulp and paper industry is well established in South Africa and its success is dependant upon the efficient production of products. Achievement of this objective is largely dependant upon the competence, recognised by this qualification, of the people who operate processing equipment. An adequate number of people with these skills are needed to ensure that the pulp and paper production units in South Africa operate productively.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

This qualification has been designed as the final in a series of four qualifications for pulp and paper operations in the pulp and paper processing and related manufacturing industry.

It is assumed that the learners are already competent in:

- National Certificate: Pulp and Paper Operations NQF Level 3 or equivalent.
- Communication, mathematical literacy, natural science and technology principles at NQF Level 3.

Recognition of Prior Learning:

Recognition of prior learning must be carried out in accordance with the policy and rules specified and used by the ETQA responsible for evaluation of people seeking RPL for a part of the whole qualification.

Access to Qualification:

Access is open to anyone with access to learning opportunities and work experience on an appropriate selection of systems. The learning assumed to be in place is essential to the learning specified in this qualification. If the learner is not yet competent in this regard the shortfalls must be addressed prior to commencing with learning specified in this qualification. This is necessary to ensure the safety of the learner, co-workers, the work process and the environment.

Access for learners with disabilities is dependant on the:

- Type and severity of the disability.
- Nature of the operational processes and requirements of the equipment.

QUALIFICATION RULES

The Qualification consists of a Fundamental, a Core and an Elective Component.

To be awarded the Qualification, learners are required to obtain a minimum of 140 credits as detailed below.

FUNDAMENTAL COMPONENT

The Fundamental Component consists of Unit Standards in:

- **Mathematical Literacy at Level 4 to the value of 16 credits**
- **Communication at Level 4 in a First South African Language to the value of 20 credits**
- **Communication in a Second South African Language at Level 3 to the value of 20 credits**

It is compulsory therefore for learners to do Communication in two different South African languages, one at Level 4 and the other at Level 3.

All Unit Standards in the Fundamental Component are compulsory.

CORE COMPONENT

The Core Component consists of Unit Standards to the value of 53 credits all of which are compulsory.

ELECTIVE COMPONENT

The Elective component of the qualification is made up of the following two sections:

Learners are to select Elective unit standards totalling 31 credits made up as follows:

At least 1 unit standard from the following unit standards:

- **Produce chemical pulp; 114241 (Revised); Level 4;15 Credits.**
- **De-ink recycled fibres for use in pulp and paper manufacturing; 114256 (Revised); Level 4;15 Credits.**
- **Produce recyclable chemical compounds and steam by converting Kraft organic and inorganic pulping by-products; 114267 (Revised); Level 4;15 Credits.**
- **Produce recyclable chemical compounds and steam by converting magnesium sulphite organic and inorganic pulping by-products; 114280 (Revised); Level 4;15 Credits.**
- **Produce chemical compounds by converting spent organic and inorganic pulping by-products using a fluidised bed reactor; 114240 (Revised); Level 4;12 Credits.**
- **Form and press paper, board or tissue; 114261 (Revised); Level 4;15 Credits.**

Unit standards from the list below to make up 140 credits for the qualification:

- **Demonstrate an understanding of the principles of work, energy and power in physics; 244097; Level 4; 6 Credits.**
- **Use automated control techniques to control a process; 244103; Level 4; 8 Credits.**
- **Apply integrated process control methods; 244100; Level 4; 15 Credits.**
- **Facilitate the preparation and presentation of evidence for assessment; 12544; Level 4; 4 Credits.**
- **Coach a team member in order to enhance individual performance in work environment; 113909; Level 4; 5 Credits.**
- **Conduct outcomes-based assessment; 115753; Level 4; 15 Credits.**
- **Perform one-to-one training on the job; 117877; Level 4; 4 Credits.**
- **Explain basic economics; 117132; Level 4; 3 Credits.**

EXIT LEVEL OUTCOMES

1. Apply scientific principles in the pulp and paper processing industry.

2. Act as a process expert to assist others to understand the process and operational issues better.
3. Control pulp and paper process operations in a range of specialised contexts.

Critical Cross-Field Outcomes:

Each critical cross-field outcome was considered in terms of its applicability to each of the specific outcomes for each unit standard. Where it was found to be applicable, the nature of the skills being developed was specified by the working group and captured in the standard.

Critical Cross-Field Outcomes are assessed per unit standards and are part of all exit level outcomes.

Critical Cross-Field Outcomes have been addressed by the exit level outcomes as follows:

While performing integrated pulp and paper process operations, qualifying learners can:

Identify and solve problems in which response displays that responsible decisions, using critical and creative thinking, have been made by:

- Responding to emergencies in a processing environment.
 - Evident in Exit Level Outcome 2.
- Investigating process improvement methods.
 - Evident in Exit Level Outcome 2 and 3.
- Applying operating procedures.
 - Evident in Exit Level Outcome 3.
- Controlling variables impacting on process operations.
 - Evident in Exit Level Outcome 2 and 3.

Work effectively with others as a member of a team, group, organisation or community by:

- Working in a coordinated team during system start-up and shut down.
 - Evident in Exit Level Outcome 3.
- Participating in a task team.
 - Evident in Exit Level Outcome 3.
- Co-ordinating one's work with that of others in the direct surrounding area, internal and external operations.
 - Evident in Exit Level Outcome 2 and 3.

Organise and manage oneself and one's activities responsibly and effectively by:

- Controlling the integrated process.
 - Evident in Exit Level Outcome 1 and 3.
- Planning and implementing one's own routine operational functions.
 - Evident in all Exit Level Outcomes.
- Planning and implementing corrective action to maintain product quality.
 - Evident in Exit Level Outcome 2 and 3.

Collect, analyse, organise and critically evaluate information by:

- Applying scientific principles to complex separation processes.
 - Evident in Exit Level Outcome 1.
- Investigating process improvement methods.

- o Evident in Exit Level Outcome 2.
- **Monitoring the impact of all process and product variables.**
- o Evident in all Exit Level Outcomes.
- **Managing records, reports and stock,**
- o Evident in Exit Level Outcome 2 and 3.

Communicate effectively by using mathematical and/or language skills in the modes of oral and/or written presentations by:

- **Recording and interpretation of instrument readings.**
- o Evident in Exit Level Outcome 2 and 3.
- **Making recommendations to the task team.**
- o Evident in Exit Level Outcome 2.
- **Issuing a permit to work in a process environment.**
- o Evident in Exit Level Outcome 2,
- **Preparing and presenting reports.**
- o Evident in Exit Level Outcome 2 and 3.

Use science and technology effectively and critically, showing responsibility towards the environment and health of others by:

- **Issuing a permit to work in a process environment.**
- o Evident in Exit Level Outcome 1.
- **Controlling technologically advanced production equipment according to operating procedures.**
- o Evident in Exit Level Outcome 3.
- **Working and interpreting technologically advanced instrumentation and computer systems**
- o Evident in Exit Level Outcome 1 and 3.

Demonstrate an understanding of the world as a set of related systems by recognising that problem solving contexts do not exist in isolation by:

- **Participating in quality assurance practices,**
- o Evident in Exit Level Outcome 2 and 3.
- **Adjusting equipment and machinery while taking cognisance of the downstream impact.**
- o Evident in all Exit Level Outcomes.

Contribute to the full personal development of each learner and the social and economic development of the society at large by:

- **Maintaining and applying safety practices in the processing environment.**
- o Evident in Exit Level Outcome 2 and 3.
- **Maintaining and applying quality practices in the processing environment.**
- o Evident in Exit Level Outcome 2 and 3.
- **Performing core operating functions.**
- o Evident in Exit Level Outcome 1 and 3.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- **Chemical principles are applied in a process environment in accordance with industry standards.**
- **The properties of fibrous materials used in pulp and paper manufacturing are explained in terms of their applicability to pulp and paper processing operations.**

- The scientific basis and operational principles underlying complex separation processes are explained in accordance with the applications in the pulp and paper processing industry.

Associated Assessment Criteria for Exit Level Outcome 2:

- Assistance is provided by participating in a task team to solve process problems, improve plant safety, quality and processing efficiency.
- Process improvement methods are investigated and recommendations are made.
- The management functions of an organisation are described and applied to own activities.
- A permit to work in a process environment is issued in accordance with workplace procedures.

Associated Assessment Criteria for Exit Level Outcome 3:

- The process is controlled using various automated methods.
- The overall process is controlled while integrating the impact of all process and material variables.
- Corrective action is taken to maintain product and process integrity.

Integrated Assessment:

The applied competence (practical, foundational and reflexive competencies) of this qualification will be achieved if a candidate is able to achieve all the exit level outcomes of this qualification.

Appropriate methods and tools must be used to assess practical, foundational and reflexive competence of the learner in all the exit level outcomes listed above, as well as to determine a learner's ability to solve problems, work in a team, organise him/herself, use applied science, and understand the implications of actions and reactions in the world as a set of related systems. Such an assessment process will determine development of the whole person, and the integration of applied knowledge and skills.

Assessors should develop, conduct, and ensure integration of, assessment by making use of a range of formative and summative assessment methods against the unit standards that make up the qualification. Combinations of applied, foundational and reflective competencies, including critical cross-field outcomes, should be assessed wherever possible.

Moderators should ensure that assessment is valid, consistent and integrated into work or learning, and that there is sufficient and authenticated evidence of learner competence against the whole qualification.

INTERNATIONAL COMPARABILITY

An extensive international comparability comparison was made including Australia, New Zealand, Britain, Scotland, Canada, the USA, Sweden, Finland, Germany and relevant African countries.

USA, Canada, Scandinavia and Germany:

Despite the fact that the pulp and paper industry is very well-developed in all the countries in the extreme northern areas of the world, most operators are still trained on the job with some short courses offered by equipment suppliers.

In the USA staff is mostly trained on the specific machines they operate at the time of establishing a new mill. TAPPI (a technical association for the pulp, paper and converting industry) offers a wide range of short, technical courses for operating staff. A number of pulp and paper related university degrees are also offered in the USA.

Canada has the largest pulp operations in the world, but has no formal national qualifications registered. As is the international trend, most operator training is done on the job; However, a number of colleges offer a Pulp and Paper Operations Certificate (post school) training course. The courses generally train the learners from 7 to 9 months in general pulp and paper mill operations for entry level machine and utility operators. As in the USA, pulp and paper related degrees are offered by local universities.

The Scandinavian pulp and paper industry (including Sweden, Norway and Finland) follows the same trend. Most training is done on the job, with no vocational training leading to a qualification. As in the USA there are a variety of pulp and paper degrees on offer at universities in all three these countries.

Three year Paper Technology Diplomas are offered by several German Universities. Although these diplomas have a strong workplace emphasis, they are comparable to South African diplomas rather than vocational training qualifications. Subject content is similar to that contained in the technical part of the South African qualification, namely: industry background, machine operations and components, maintenance functions, computer skills with a technical project to complete the diploma.

Africa:

African countries with manufacturing facilities (including SADC countries) were searched for applicable qualifications or training programmes, but no relevant qualifications are offered in any of these countries. Similar to international companies, the majority of training is provided by equipment suppliers with three to five day short training courses. The only pulp and paper facility in the SADC outside South Africa is in Swaziland, learners from this facility will be trained according to the South African qualification.

New Zealand:

A comparison with the NZQA was included, because it is an educational structure comparable to the NQF. An internet search of the NZQA revealed three registered qualifications (National Certificates) ranging from Levels 2 to 4 in Pulp and Paper Manufacturing.

The New Zealand "National Certificate in Pulp and Paper Manufacturing (Level 2)" is an introduction to pulp and paper operations containing a compulsory core component consisting of units standards in communication, teamwork, employment relations, health, safety, quality, environmental protection and manufacturing process knowledge. The learner has to choose 10 credits from Elective Group A which contains unit standards dealing with specific pulp and paper industry skills and 19 credits from Elective Group B which is made up of general unit standards such as workplace safety, distribution, business administration and computer skills.

The compulsory core sections of the National Certificates in Pulp and Paper Manufacturing Levels 3 and 4 are common so that people wishing to progress from the Level 3 qualification to the Level 4 qualification have a common grounding in the principles of pulp and paper manufacturing. This core component consist of unit standards with a technical focus such as pumps and valves, chemistry and physics and the fundamentals of process control systems make up.

For competence in the "National Certificate in Pulp and Paper Manufacturing (Level 3)" the learner needs to prove competence in the 28 credits core unit standards, 35 credits from pulp and paper specialisation areas and 27 general electives. The general elective sections of both Level 3 and 4 qualifications also provide recognition for a range of manufacturing and generic industry skills; and cover areas such as workplace safety, distribution, business administration, and communications.

Just as in the South African NQF Level 4 qualification, learners completing the "National Certificate in Pulp and Paper Manufacturing (Level 4)" specialise in either pulpmaking, papermaking or chemical recovery. The learner needs to prove competence in a total of 120 credits which consist of 28 credits core unit standards and 35 credits specialisation electives. If all 28 credits for the core were obtained in the Level 3 qualification these credits are reflected here again.

The South African qualifications compare very well with the New Zealand qualifications, but the fact that the South African qualifications have a fundamental component of communication and mathematical unit standards is advantageous for the South African learner.

Australia:

An internet search of the AQF revealed that the following four qualifications are registered on the AQF:

- "Certificate I in Pulp and Paper Manufacturing".
- "Certificate II in Pulp and Paper Manufacturing".
- "Certificate III in Pulp and Paper Manufacturing".
- "Certificate IV in Pulp and Paper Manufacturing".

A comparison with these qualifications was included because the AQF is an educational structure comparable to the NQF.

The new Australian "Certificate I in Pulp and Paper Manufacturing" contains only a compulsory core consisting of five units in communication, safety, quality and the use of hand held tools which all have to be achieved. This qualification is not compulsory for entry to the pulp and paper qualifications as the majority of trainees enter the industry at Certificate II Level.

The Level 2 to 4 qualifications all have a compulsory core consisting mainly of communication, safety and quality. The Level 3 and 4 qualifications also include a compulsory unit on problem solving.

From Level 2 onwards the learner has to choose specialisation units from the following range of specialisation areas: Primary resources, pulping operations, chemical recovery and waste paper handling, waste paper operations, stock preparation, wet end operations, dry end operations, paper coating and finishing and converting. The Level 2 and 3 qualifications are completed with a choice of two elective units. The Level 2 and 3 elective component consist of a range of safety, emergencies, first aid, training, cramage and specialist technical skills Unit Standards.

The new Australian "Certificate IV in Pulp and Paper Manufacturing" has a compulsory core consisting of communication, productivity calculations, OHS policy and procedures, quality and advanced problem solving. This learner already specialises in one specific area and has to make a choice of one specialisation unit from the following range of specialisation areas: resources, pulping operations, chemical recovery and paper manufacture. The qualification is completed with a choice of three elective units ranging from leadership, workplace relationships, customer care, training and assessment, to cramage and sampling units.

The South African qualification includes similar core qualification structures and progressions from NQF Level 2 to NQF Level 4 and also uses separate qualifications to address pulp and paper production and pulp and paper hygiene products manufacturing. The main difference is that the Australian qualification requires of the learner to choose a specialisation area in Level 2, whereas the South African qualification offers the learner the opportunity to gain an overview of all the pulp and paper processes on Level 2 before choosing a specialisation area in Level 3.

Britain:

A comparison with the British qualification was included, because the British pulp and paper industry is very well developed and the NVQ is an educational structure comparable to the NQF.

An internet search of the British NVQ and the Scottish SVQ revealed the following Level 2 and 3 qualifications:

- The PAAWQSET Level 2 Certificate in Paper Technology.
- The PAAWQSET Level 3 Certificate in Paper Technology.

The South African NQF Level 2 qualification compares very well with the British Level 2 qualification which is made up of six compulsory units in Health and Safety, quality, raw materials, papermaking processes, plant services and process control. The main difference is that the British qualifications contain no fundamental communication and mathematical units.

The PAAWQSET Level 3 Certificate in Paper Technology has a compulsory core containing units on Health and Safety, quality, teamwork and problem solving. The learner has to choose between Group B units and Group C units to complete the qualification. Group B contains only papermaking units, whereas Group C contains general pulp and paper operations units such as chemical recovery, coating and finishing operations.

Being the highest pulp and paper qualification registered on the QCA, this Level 3 qualification compares with the content of the South African NQF Level 3 and 4 qualifications, but it is clear that the South African qualification provides the learner with more theoretical knowledge and practical competence. The South African NQF Level 4 qualification also provides the learner with the opportunity to progress to tertiary education.

Summary:

In conclusion, a comparison with similar international qualifications indicates that the focus is the same as those of the benchmark qualifications. Both local and international qualifications place considerable emphasis on safety, quality and problem solving skills and allow the learner to choose from a range of specialisation areas in the paper industry.

The Pulp and Paper Operations qualifications compare well with the best international qualifications and training programmes offered. The compulsory fundamental and technical content incorporated in the qualification will serve to support qualifying learners to make better informed, autonomous decisions within a more compact timeframe than most international learners and will increase transportability of the qualification considerably.

ARTICULATION OPTIONS

This qualification follows a vertical progression from the introductory NQF Level 1, Chemical Operations Qualification and will enable the qualifying learner to progress to a technologist role through the National Certificate in Pulp and Paper Technology, NQF Level 5. In addition, each of these qualifications have elective specialisation areas associated with the different operational areas of a pulp and paper production facility.

This qualification follows a direct vertical progression from the NQF Level 3, Pulp and Paper Operations qualification and will enable the qualifying learner to progress to the National Diploma in Pulp and Paper Technology at NQF Level 5 and any other higher pulp and paper qualification still to be developed for the pulp and paper industry.

This qualification is suitable for a wide range of technically oriented supervisory careers.

The generic knowledge and expertise enables the learner to progress horizontally into a career where knowledge of processing operations is necessary. These include manufacturing

qualifications within, amongst others, the engineering, construction, chemical and pulp and paper industries.

Horizontal articulation within the processing industry can occur with the following registered NQF Level 4 qualifications:

- **ID 48915: Further Education and Training Certificate: Manufacturing and Assembly Operations Supervision.**
- **ID 48919: Further Education and Training Certificate: Measurement, Control and Instrumentation.**
- **ID 58538: Further Education and Training Certificate: Chemical Operations.**
- **New draft; Further Education and Training Certificate: Pulp and paper hygiene products manufacturing.**

The fundamental and generic core learning components will equip the learner with credits which will be useful in other fields of learning that the learner might wish to change to at any future stage.

MODERATION OPTIONS

- Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant ETQA.
- Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.
- Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQA's policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQAs (including professional bodies); and in terms of the moderation guideline detailed immediately below.
- Moderation should also encompass achievement of the competence described both in individual unit standards, exit level outcomes as well as the integrated competence described in the qualification.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

In order to assess this qualification, the assessor needs:

- Assessors to meet the requirements of the generic assessor standards.
- Competence against the unit standard "Conduct outcomes-based assessments".
- Detailed documentary proof of educational qualification, practical training undergone, and/or experience gained at an appropriate level in the work concerning pulp and paper operations. This must meet the relevant ETQA policies and guidelines. The subject matter expertise of the assessor can be established through the recognition of prior learning.
- Registration with, or recognition by, the relevant ETQA as specified through an appropriate memorandum of understanding.

NOTES

This qualification replaces qualification 48643, "Further Education and Training Certificate: Chemical Pulp Manufacturing", Level 4, 168 credits.

This qualification replaces qualification 48644, "Paper, Board or Tissue Manufacturing", Level 4, 176 credits.

This qualification replaces qualification 48645, "Pulp and Paper Chemical Recovery", Level 4, 158 credits.

Page:

- This qualification addresses the knowledge and competencies required by learners in the pulp and paper industries.
- Knowledge relating to the pulp and paper processing industries includes process specific technology, communication, mathematics, applied science, and SHEQ.
- This qualification may be applicable to other processing operations. This is subject to its acceptance by appropriate subject matter experts.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Fundamental	9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6
Fundamental	119462	Engage in sustained oral/signed communication and evaluate spoken/signed texts	Level 4	5
Fundamental	119469	Read/view, analyse and respond to a variety of texts	Level 4	5
Fundamental	9016	Represent analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	Level 4	4
Fundamental	119471	Use language and communication in occupational learning programmes	Level 4	5
Fundamental	7468	Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6
Fundamental	119459	Write/present/sign for a wide range of contexts	Level 4	5
Core	14667	Describe and apply the management functions of an organization	Level 4	10
Core	244104	Issue a permit to work in a process environment	Level 4	4
Core	244105	Participate in a task team in a process environment	Level 4	4
Core	244089	Understand applications of Physical Chemistry in a processing environment	Level 4	6
Core	114246	Understand the properties of fibrous materials used in pulp and paper manufacturing	Level 4	10
Core	244101	Use a panel or a computer interface to control a process	Level 4	4
Core	244106	Use standard operating procedures to control a process from a panel or computer interface	Level 4	15
Elective	113909	Coach a team member in order to enhance individual performance in work environment	Level 3	5
Elective	117132	Explain basic economics	Level 3	3
Elective	117877	Perform one-to-one training on the job	Level 3	4
Elective	244100	Apply integrated process control methods	Level 4	15
Elective	246716	De-ink recycled fibres for use in pulp and paper manufacturing	Level 4	15
Elective	244097	Demonstrate an understanding of the principles of work, energy and power in physics	Level 4	6
Elective	12544	Facilitate the preparation and presentation of evidence for assessment	Level 4	4
Elective	246713	Form and press paper, board or tissue	Level 4	15
Elective	246718	Produce chemical compounds by converting spent organic and inorganic pulping by-products using a fluidised bed reactor	Level 4	12
Elective	246717	Produce chemical pulp	Level 4	15
Elective	246715	Produce recyclable chemical compounds and steam by converting Kraft organic and inorganic pulping by-products	Level 4	15

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	246714	Produce recyclable chemical compounds and steam by converting magnesium sulphite organic and inorganic pulping by-products	Level 4	15
Elective	244103	Use automated control techniques to control a process	Level 4	8
Elective	115753	Conduct outcomes-based assessment	Level 5	15



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Form and press paper, board or tissue

SAQA US ID	UNIT STANDARD TITLE		
246713	Form and press paper, board or tissue		
ORIGINATOR			PROVIDER
SGB Pulp and Paper			
FIELD			SUBFIELD
6 - Manufacturing, Engineering and Technology			Engineering and Related Design
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	15

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the forming and pressing process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the forming and pressing process.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce recyclable chemical compounds and steam by converting magnesium sulphite organic and inorganic pulping by-products

SAQA US ID	UNIT STANDARD TITLE		
246714	Produce recyclable chemical compounds and steam by converting magnesium sulphite organic and inorganic pulping by-products		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	15

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the process of converting magnesium sulphite organic and inorganic pulping by-products to chemical compounds.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the converting process.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce recyclable chemical compounds and steam by converting Kraft organic and inorganic pulping by-products

SAQA US ID	UNIT STANDARD TITLE		
246715	Produce recyclable chemical compounds and steam by converting Kraft organic and inorganic pulping by-products		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	15

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the process of converting Kraft organic and inorganic pulping by-products to chemical compounds.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the converting process.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**De-ink recycled fibres for use in pulp and paper manufacturing**

SAQA US ID		UNIT STANDARD TITLE	
246716		De-ink recycled fibres for use in pulp and paper manufacturing	
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	15

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the de-inking process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the de-inking process.


SOUTH AFRICAN QUALIFICATIONS AUTHORITY
UNIT STANDARD:
Produce chemical pulp

SAQA US ID		UNIT STANDARD TITLE	
246717		Produce chemical pulp	
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	15

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the chemical pulping process.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the chemical pulping process.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Produce chemical compounds by converting spent organic and inorganic pulping by-products using a fluidised bed reactor

SAQA US ID	UNIT STANDARD TITLE		
246718	Produce chemical compounds by converting spent organic and inorganic pulping by-products using a fluidised bed reactor		
ORIGINATOR		PROVIDER	
SGB Pulp and Paper			
FIELD		SUBFIELD	
6 - Manufacturing, Engineering and Technology		Engineering and Related Design	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	12

SPECIFIC OUTCOME 1

Explain the fundamental principles applicable to the process of converting spent organic and inorganic pulping by-products to chemical compounds.

SPECIFIC OUTCOME 2

Explain the quality requirements of raw materials received.

SPECIFIC OUTCOME 3

Assess raw materials quality in accordance with workplace specifications.

SPECIFIC OUTCOME 4

Monitor and control the converting process.

No. 927

5 October 2007

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Transport and Logistics Operations

registered by Organising Field 11, Services, publishes the following Qualification and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification and Unit Standards. The full Qualification and Unit Standards can be accessed via the SAQA web-site at www.saqqa.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later 5 November 2007**. All correspondence should be marked **Standards Setting – Transport and Logistics Operations** addressed to

The Director: Standards Setting and Development
SAQA

Attention: *Mr. D. Mptiuthing*

Postnet Suite 248


Private Bag X06

Waterkloof

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e-mail: dmptiuthing@saqa.org.za


DR. S. BHIKHA

DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:
 Further Education and Training Certificate: Freight Forwarding and Customs Compliance

SAQA QUAL ID	QUALIFICATION TITLE		
59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
QUALIFICATION TYPE	FIELD	SUBFIELD	
Further Ed and Training Cert	11 - Services	Transport, Operations and Logistics	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	135	Level 4	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

This Qualification serves to equip the qualifying learner with the fundamental skills, knowledge and attitudes necessary to support the provision of world class services by enhancing the learner's ability to interact positively with clients and customers and to solve problems they come across in the workplace in the international logistics and supply chain management field and it will add value to the qualifying learner in terms of enrichment of the person, their status and the recognition offered them. It also provides an opportunity for learners to learn and to apply skills in relation to the workplace.

The Qualification will provide learners with a solid understanding of the relevant legislation and regulations governing the environment in which they operate and also provide them with the ability to appropriately select and apply the relevant processes and procedures governing the operations with which they are involved.

Learners who successfully complete this Qualification will be able to:

- Communicate verbally and in writing using a variety of formats and use the basics of mathematics.
- Supervise a freight forwarding and customs compliance function.
- Solve operational problems within the freight forwarding and customs compliance environment.
- Carry out freight forwarding operations in customs compliance with client requirements and legislation.

This Qualification aims to assist people entering a career in the freight forwarding and customs compliance sector and those already working in it maintain and improve their competencies in meeting and anticipating the needs of their clients and customers. It will create the opportunity:

- For a career path.
- To provide process and service standards.
- To improve productivity.
- To improve service delivery.

Learners will be provided with the conceptual framework to perform routine and non-routine functions and to supervise the performance of other functions, displaying the ability to combine and integrate competencies in their application in the freight forwarding and customs compliance environment.

Rationale:

The freight forwarding and customs compliance industry serves the need of society and the economy by providing for the distribution and carriage of goods, cargo and freight both on a national and an international level. It serves every industry in South Africa and therefore contributes to the growth of the South African economy as a whole. A healthy and growing economy is in turn vital in terms of the development and upliftment of the country, its infrastructure and its entire people.

It has been estimated that logistics as a whole constitute at least 14% of the costs of the goods in South Africa, which is at least 50% above the global norm. A large proportion of this overspend is attributed to inefficiencies caused by lack of competence. In order to become world competitive, South Africa needs to deliver its goods on time, at the right place and at an acceptable cost. In order to do this requires the establishment and maintenance of world class supply chains. Competent (qualified) international logistics and supply chain management practitioners and support staff are required for this purpose.

This Qualification will meet the needs of learners in the freight forwarding and customs compliance field (or those who wish to enter this field) who require the technical expertise and essential knowledge needed to earn a formal Qualification.

This is the third Qualification in a series for learners who want to follow a career in the field of freight forwarding and customs compliance. This Qualification focuses on developing skills and knowledge necessary to perform in a competent manner in this industry.

The FETC: Freight Forwarding and Customs Compliance: replaces the following Qualifications:

- ID 22443: National Certificate: Freight Forwarding, NQF Level 4, 136 credits.
- ID 22441: National Certificate: Customs Clearing, NQF Level 4, 145 credits.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

- Communication at NQF Level 3.
- Mathematical Literacy at NQF Level 3.

Access to the Qualification:

Access is open to all learners bearing in mind the learning assumed to be in place.

QUALIFICATION RULES

The Qualification consists of a Fundamental, a Core and an Elective Component.

To be awarded the Qualification learners are required to obtain a minimum of 135 credits as detailed below.

Fundamental Component:

The Fundamental Component consists of Unit Standards in:

- **Mathematical Literacy at NQF Level 4 to the value of 16 credits.**
- **Communication at NQF Level 4 in a First South African Language to the value of 20 credits.**
- **Communication in a Second South African Language at NQF Level 3 to the value of 20 credits.**

It is compulsory therefore for learners to do Communication in two different South African languages, one at NQF Level 4 and the other at NQF Level 3.

All Unit Standards in the Fundamental Component are compulsory.

Core Component:

The Core Component consists of Unit Standards to the value of 55 credits all of which are compulsory.

Elective component:

The Elective Component consists of a number of specializations each with its own set of Unit Standards. Learners are to choose a specialization area and must choose Elective Unit Standards to the value of 24 credits from the Unit standards listed under that specialization so as to attain a minimum of 135 credits.

The specialisations are as follows:

Dangerous Goods:

- **Accept and process dangerous goods for transportation by air.**
- **Facilitate the forwarding and clearing of dangerous goods for transportation.**
- **Handle dangerous goods during warehousing and storage.**
- **Identify and classify dangerous goods for transportation.**
- **Identify, pack, mark and label dangerous goods for transportation by air.**
- **Load/unload dangerous goods for transportation by road.**
- **Pack, mark, document and handle export dangerous goods by surface.**
- **Package dangerous goods for transportation.**

Finance and Purchasing:

- **Administer foreign exchange transactions in an international trading company.**
- **Analyse and report on client profitability.**
- **Generate shipment cost estimates.**
- **Perform international purchasing functions.**
- **Perform international trade calculations.**
- **Secure freight forwarding business.**

Customs:

- **Accredit Customs clearing clients.**
- **Analyse and solve complex Customs tariff classification problems.**
- **Certify certificates of origin and other commercial documents.**

Insurance:

- **Apply knowledge of insurance to the transportation of a consignment of goods.**
- **Apply lost, discrepant and damaged cargo procedures.**

- Apply the law of contract to insurance.
- Arrange and administer insurance of goods in transit.
- Demonstrate knowledge and understanding of the scope of transportation insurance.
- Demonstrate knowledge and understanding of transportation insurance.
- Know and understand the basics of marine insurance.

EXIT LEVEL OUTCOMES

1. Communicate verbally and in writing using a variety of formats and use the basics of mathematics.
2. Supervise a freight forwarding and customs compliance function.
3. Solve tactical and operational problems within the freight forwarding and customs compliance environment.
4. Carry out freight forwarding operations in customs compliance with client requirements and legislation.

ASSOCIATED ASSESSMENT CRITERIA

Associated Assessment Criteria for Exit Level Outcome 1:

- The audience needs and expectations are accommodated in both written and verbal communication.
- Language and texts are used to interpret and write communications in all contexts.
- Mathematics is used in both personal and business contexts.

Associated Assessment Criteria for Exit Level Outcome 2:

- Freight forwarding and customs compliance operations are planned, executed and reported on in terms of importers 'and exporters' needs.
- Policies and procedures for customs compliance are adhered to by team members.
- Correctional and preventative action is taken in light of non-compliant performance.

Associated Assessment Criteria for Exit Level Outcome 3:

- International logistics and customs compliance problems are identified in order to apply appropriate action.
- Responsibilities are delegated for the purpose of solving international logistics and customs compliance problems.
- Actions are taken to ensure that international logistics and customs compliance problems have been satisfactorily solved.
- Reports are compiled and communicated in respect of preventative and correctional action taken.

Associated Assessment Criteria for Exit Level Outcome 4:

- Standard operating procedures are implemented for the purpose of the international movement of goods.
- Freight forwarding operations are reported on in order to monitor performance.
- International and local legislation is monitored in order to ensure customs compliance of the freight forwarding operation.

INTERNATIONAL COMPARABILITY

This Qualification is part of a series of Qualifications ranging from Level 2 to 5 in the field of international logistics and supply chain management and it was compared to other, similar

Qualifications, certificates, skills programmes and courses in the international arena as having best practice.

No African country was found to offer any applicable Qualifications and training programmes.

Within the International Trade Arena, the leaders in training and development are the International Federation of Freight Forwarders Associations (FIATA) and the forum for International Trade Training (FITT). This Qualification was compared with the Qualifications and short courses offered by these two major providers. It was found that the four Qualifications in International Trade, Freight Forwarding and Customs Clearing registered on the NQF cover what is offered in the FIATA and FITT programmes. In their programmes everything is covered in either the Level 3 or in this Level 4 Qualification.

By completing this Level 4 Qualification the learner will have met the international standards demanded at this level. This Level 4 Qualification also includes Fundamental learning. However the Core competencies of the FIATA and FITT courses are spread over the two Qualifications at Levels 3 and 4. This notwithstanding, the theoretical and practical competencies of this Qualification corresponds with those of FIATA and FITT.

International: International Federation of Freight Forwarders Association (FIATA)

Diploma in Freight Forwarding:

● **An introduction to Freight Forwarding:**

- International freight forwarder and the freight business.
- Organisation of the company.
- Financial requirements.
- Professional organisations.
- FIATA documents and forms.
- General knowledge of transport and related geography.
- Special transport services.
- Packing requirements.
- Co-operation with other service providers.
- Information and communication technologies.

● **Sea Transport (General):**

- Regulations for the transport of goods by sea.
- Shipping services.
- Types of vessels.
- Bill of lading.
- Pricing of ocean freight.
- Geography of ocean transport and port facilities.

● **Maritime Containers (Sea Containers):**

- General knowledge of container transports by sea.
- Types and specification for most used containers.
- Loading procedure.
- Way-bills and accompanying documents.
- Pricing of inland and ocean freight.
- Geography of container traffic.

● **Air Transport:**

- General conditions of carriage.
- Types and specifications of the most used aircrafts and air-pallets.
- Way-bills and accompanying documents.

- o Calculation of airfreight.
- o Geography in air transport.

- **Road Transport:**
 - o Legal requirements for national and international road transport.
 - o Types of road vehicles.
 - o Way-bills and accompanying documents.
 - o Tariffs.
 - o Geography of road transport.

- **Rail Transport:**
 - o Legal requirements of national and international rail transport.
 - o Ways and means of transportation.
 - o Way-bills and accompanying documents.
 - o Tariffs (conventional or combined transport).
 - o Geography and operational aspects in rail transport.

- **National/International Carriage by Inland Waterway:**
 - o Legal requirements of transports by inland waterway.
 - o Types of barges used in inland waterway carriage.
 - o Way-bills and accompanying documents.
 - o Determination of freight charges for inland waterway transport.
 - o Geography of inland waterways.

- **Customs Procedures:**
 - o General information on the national customs administration.
 - o National customs tariffs.
 - o National customs procedures.
 - o Liability of the freight forwarder.
 - o International conventions.
 - o Other possible duties of the customs administration.

- **Logistics:**
 - o Logistics and forwarding.
 - o Logistics concept/project.
 - o Physical distribution systems.
 - o Sub-systems in logistics (Supply Chain Management).
 - o Information handling and control issues.
 - o Value added services.
 - o Commodity related systems.
 - o Rights and duties of the warehouse operator and the customer.
 - o Types of warehouse.
 - o Warehouse documents and information technology.
 - o Construction, layout and safety.
 - o Debit of warehouse charges/rent.
 - o General.
 - o Insurance.
 - o Liability insurance.
 - o Transport insurance.

- **Dangerous Goods:**
 - o Role of parties in the transport chain.
 - o Regulations.
 - o Classification.
 - o Marking of hazardous cargo and cargo handling.

- o Training.
- o Documentation.
- **Information and Communications Technologies (ICT) in Forwarding:**
 - o Basic understanding of computer and its environment.
 - o The role of information technologies in forwarding.
 - o Data storage and management and databases.
 - o Principles of networking and data sharing.
 - o Telecommunication and its applications.
 - o Electronic data interchange and value-added network.
 - o Bar-coding and its application.
 - o Internet and web-based technology.
 - o e-Commerce.
 - o Web-based applications and e-marketplace.
 - o Security.
 - o Electronic fund transfer and e-payments.

The above Qualification is offered throughout the international logistics and supply chain management world and it was found that it compares exceptionally well with both the Level 3 and Level 4 Qualifications. There is however no Fundamental learning in this international Qualification.

Canada: Forum for International Trade Training (FITT):

- **Certificate in International Marketing:**
 - o The principles of marketing.
 - o Domestic vs. International marketing.
 - o Market research.
 - o Market access.
 - o Cultural considerations in international marketing.
 - o Political, legal and regulatory considerations in international marketing.
 - o Marketing the right product or service.
 - o Personal selling abroad.
 - o Mass marketing abroad.
 - o Enhancing the marketing effort.
 - o Marketing services.

There are only a few areas of similarity between the FETC: Freight Forwarding and Customs Customs compliance and the FITT qualification as the latter focuses quite substantially on the marketing and selling process. The FETC: Freight Forwarding and Customs Customs compliance only has certain components that focus on this area.

- **Certificate in International Trade Finance:**
 - o An introduction to trade finance.
 - o The financing presentation.
 - o Trade finance, risk analysis and risk management.
 - o Foreign exchange rates.
 - o Export costing and transaction viability.
 - o Payment methods and short term financing.
 - o Factoring and forfeiting.
 - o Understanding and processing documentary credits.
 - o Bonds and guarantees.
 - o Export credit insurance and financing.
 - o Cash flow planning.
 - o Countertrade and consignment.

It is quite obvious from the above Qualification that it only has one single aspect that compares with ours in that we only look at the interpretation of financial statements and not the in-depth manner in which they look into international trade finance. It must be noted however, that it is within the Elective category of the South African qualification that a far more in-depth look is taken into finance.

Canada: Canadian International Freight Forwarders Association (CIFFA):

- **Certificate in the Risks Forwarders Face:**
- Errors.
- Omissions.
- Standard Trading Conditions.
- Understanding Legal Liability.

The aspects contained in the above Qualification are covered quite comprehensively in the South African Qualification and therefore compares favourably.

- **Certificate in Cargo Insurance:**
- Transforming Lost or Damaged Cargo into a satisfying Experience.

For the above Qualifications the contents are covered in the 'Elective' component of this Qualification.

Ireland: Irish International Freight Forwarding Association (IIFFA):

- **Traineeship in Freight Forwarding:**
- General Knowledge of the Industry,
- Sea transport.
- Road Transport.
- Air Transport.
- Customs procedures.
- Warehousing/Logistics.
- Transport Insurance.
- Customer Service (City and Guilds).
- Manual Handling Training (City and Guilds).
- ECDL (European Computer Driving Licence).

The learning taking place in the above Qualification has similar outcomes to the South African one and therefore they compare favourably with each other. It must be noted that the choice of Electives offers the degree of alignment between the two qualifications.

Japan: Customs Training Institute:

- **Certificate: Introduction for Officials Level 3:**
- Acquire Sense of Responsibility as a Member of Society.
- Duties and Responsibilities as Public Employee.
- Acquire Basic knowledge and Skills for Efficient Customs Work.
- **Certificate: Intermediate Level 3:**
- Acquire Practical knowledge and Skills of Customs Work.
- **Certificate: Technical:**
- Officials acquire knowledge for tasks

The above courses from Japan only offer an introductory insight to Customs work and therefore do not go into the same detail as the South African qualification. As can be seen they do not cover any of the practical work required at this level and focus almost exclusively on "Customs' customs compliance whereas the South African Qualifications is far more generalised on international logistics and supply chain management.

United States of America: Treasury of Unit States of America Customs Service:

- **Certificate in Customs clearance on desk:**
 - Office policies of a Customs Broker office.
 - Operations procedures for a Customs Brokerage Office.
 - Import References.
 - Customs Customs compliance Review Materials,
 - Customs Clearing Tutoring (course format and links),
 - Customs broker Licence Preparation Course (handouts).
 - FDA Regulations and Procedures.

- **Certificate in Export Operations on desk:**
 - Professional International Freight Forwarder Training Course Handouts.
 - Export Documentation - the story behind the documents.
 - Export Trading Company (ETC) Information.
 - Freight Forwarder Overview Information.

- **Certificate in Customs Customs compliance Review:**
 - Classification.
 - Valuation.
 - Binding Rulings.
 - Customs Law.
 - Recordkeeping.
 - Regulations.
 - Overview.
 - Customs Procedures.

- **Certificate in Freight Forwarder Overview:**
 - Carrier Information.
 - Shipper Documentation.
 - Freight Forwarding Today.
 - Export Regulations.
 - Export Software.
 - References.

All the above Qualifications are very similar in nature to the South African one and therefore compare well with each other.

United States of America: Centres for International Trade Development:

- **Certificate in Import/Export:**
 - Basic Principles of Exporting and Importing.
 - Documentation.
 - Logistics.
 - Financing.

The above Qualification focuses mainly on import and export only and does not include other aspects of international logistics and supply chain management which have been included in the South African Qualification.

United Kingdom: The Institute of Export:

- **Certificate in Core:**
 - An introduction to Exporting.
 - An introduction to Importing.
 - Getting Paid in international trade.
 - Advanced Letters of Credit.
 - An Introduction To Export Marketing.
 - Marketing Services in International Trade.
 - The Complete Export Manager.

The above Qualification focuses mainly on export only and does not include other aspects of international logistics and supply chain management which have been included in the South African Qualification.

United Kingdom: British International Freight Association (BIFA):

- **Certificate in Dangerous Goods By Air: Revalidation: DGA2.**
- **Certificate in Aviation Security Cargo Level 2: Supervisor: A2/3.**
- **Certificate in Dangerous Goods By Air: DGA1.**
- **Certificate in BTEC Intermediate Award in Multimodal International Freight Procedures: MFT1.**
- **Certificate in First Aid - Appointed Person.**
- **Certificate for Dangerous Goods Safety Advisor: DGSA.**
- **Certificate in Export Documentation, Procedures and Practice: EXP4.**
- **Certificate in Purchasing from Overseas: IMP2.**
- **Certificate in Working with Letters of Credit: TP3.**
- **Certificate in Dangerous Goods by Road: DGR1.**
- **Certificate in Dangerous Goods by Sea: DGS1.**
- **Certificate in Customs Procedures for Import Cargo: CM2.**
- **Certificate in Customs Procedures for Export Cargo: CM1.**
- **Certificate in Aviation Security Cargo Level 2 - Supervisor: A2/3.**

If a combination of the above courses were taken they would compare well to the South African Qualification.

Hungary: Budapest Muszaki És Gazdasági Tudományi Egyetem:

- **Diploma in Freight Forwarding Managers:**
 - National and International Legislation.
 - Agreements, Rules and Practices on Freight Forwarding.
 - Transportation by Rail, Road, Air or Inland Navigation and Maritime Transport.
 - Relevant Procedures.
 - Insurance.

This particular Diploma has all the elements contained in the South African Qualification and therefore compares very well with it. Our Qualification however contains more detail and competencies.

None of the SADC countries seemed to have any Qualifications or course for us to make comparisons with. Some may however offer the FIATA Diploma.

Conclusion:

This Level 4 Qualification appears to be midway between the (FIATA) and (FITT) training courses and looks similar to the other international course shown here as a comparison.

Also as South Africa emerges from its previous limited trading situation to one of being a global player also means that there is a far greater demand for people at this level getting involved in and employed in the International Trade sector.

While there may be different ways of expressing the content of the learning taking place all over the world, there is sufficient consensus that it all refers to the same basic competencies required to work within the 'international logistics and supply chain management' environment.

ARTICULATION OPTIONS

Horizontal articulation is possible with:

- ID 35928: National Certificate: Business Administration Services, NQF Level 4.
- ID 49129: Further Education and Training Certificate: Management and Administration, NQF Level 4.
- ID 57712: Further Education and Training Certificate: Generic Management, NQF Level 4.
- ID 57849: Further Education and Training Certificate: Dangerous Goods: Multi-modal Transportation, NQF Level 4.
- ID 57806: Further Education and Training Certificate: Exports, NQF Level 4.
- ID 49155: Further Education and Training Certificate: Shipping, NQF Level 4.

Vertical articulation is possible with:

- National Certificate: Management, NQF Level 5.
- ID 49126: National Certificate: Management and Administration, NQF Level 5.
- ID 49469: National Diploma: Complex Procurement, NQF Level 5.
- ID 57957: National Certificate: Export Administration, NQF Level 5.
- ID 58473: National Diploma: Freight Handling Logistics, NQF Level 5.
- ID 58600: National Certificate: Land Transport Planning, NQF Level 5.

MODERATION OPTIONS

- Anyone assessing a learner or moderating the assessment of a learner against this Qualification must be registered as an assessor with the relevant ETQA.
- Any institution offering learning that will enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.
- Assessment and moderation of assessment will be overseen by the relevant ETQA according to the ETQA's policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQA's (including professional bodies); and in terms of moderation guideline detailed in "Qualification Assessor Criteria.
- Moderation must include both internal and external moderation of assessments at exit points of the Qualification, unless ETQA policies specifies otherwise. Moderation should also encompass achievement of the competence described both in individual Unit Standards, Exit Level Outcomes as well as the integrated competence described in the Qualification.
- Anyone wishing to be assessed against this Qualification may apply to be assessed by any assessment agency, assessor or provider institution that is accredited by the relevant ETQA.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

For an applicant to register as an assessor, the applicant should:

- Be registered as an assessor with the relevant ETQA or an ETQA that has a memorandum of understanding with the relevant ETQA.
- Be in possession of a relevant Qualification at NQF Level 3 or higher.

NOTES

This qualification replaces the following qualification:

- ID 22443: National Certificate: Freight Forwarding, NQF Level 4, 136 credits.
- ID 22441: National Certificate: Customs Clearing, NQF Level 4, 145 credits.

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Fundamental	9015	Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6
Fundamental	119462	Engage in sustained oral/signed communication and evaluate spoken/signed texts	Level 4	5
Fundamental	119469	Read/view, analyse and respond to a variety of texts	Level 4	5
Fundamental	9016	Represent analyse and calculate shape and motion in 2- and 3-dimensional space in different contexts	Level 4	4
Fundamental	119471	Use language and communication in occupational learning programmes	Level 4	5
Fundamental	7468	Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6
Fundamental	119459	Write/present/sign for a wide range of contexts	Level 4	5
Core	252257	Apply international trade systems, policies and procedures	Level 4	5
Core	117668	Demonstrate an understanding of the basics of local and international trade	Level 4	15
Core	117667	Demonstrate the basic legal principles applied to shipping	Level 4	8
Core	242821	Identify responsibilities of a team leader in ensuring that organisational standards are met	Level 4	6
Core	117156	Interpret basic financial statements	Level 4	4
Core	252263	Perform the processes and procedures for the administration of import transactions	Level 4	6
Core	252272	Perform the processes and procedures required for the administration of export transactions	Level 4	6
Core	252262	Resolve customer service problems	Level 4	5
Elective	242986	Accept and process dangerous goods for transportation by air	Level 4	6
Elective	252268	Accredit customs clearing clients	Level 4	5
Elective	252265	Administer foreign exchange transactions in an international trading company	Level 4	5
Elective	120020	Apply knowledge of insurance to the transportation of a consignment of goods	Level 4	3
Elective	11399	Apply lost, discrepant and damaged cargo procedures	Level 4	3
Elective	120128	Apply the law of contract to insurance	Level 4	3
Elective	252243	Arrange and administer insurance of goods in transit	Level 4	6
Elective	252248	Certify certificates of origin and other commercial documents	Level 4	7
Elective	120013	Demonstrate knowledge and understanding of the scope of transportation insurance	Level 4	3
Elective	120009	Demonstrate knowledge and understanding of transportation insurance	Level 4	3
Elective	242991	Facilitate the forwarding and clearing of dangerous goods for transportation	Level 4	4
Elective	252258	Gather information and report on client profitability	Level 4	4

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	252266	Generate shipment cost estimates	Level 4	6
Elective	242996	Handle dangerous goods during warehousing and storage	Level 4	4
Elective	242997	Identify and classify dangerous goods for transportation	Level 4	4
Elective	242987	Identify, pack, mark and label dangerous goods for transportation by air	Level 4	2
Elective	117655	Know and understand the basics of marine insurance	Level 4	8
Elective	242990	Load/unload dangerous goods for transportation by road	Level 4	10
Elective	242985	Package dangerous goods for transportation	Level 4	4
Elective	252269	Perform international purchasing functions	Level 4	7
Elective	252274	Perform international trade calculations	Level 4	6
Elective	252253	Secure freight forwarding business	Level 4	6
Elective	252254	Analyse and solve complex customs tariff classification problems	Level 5	12



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Arrange and administer insurance of goods in transit**

SAQA US ID	UNIT STANDARD TITLE		
252243	Arrange and administer insurance of goods in transit		
ORIGINATOR	PROVIDER		
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	6

SPECIFIC OUTCOME 1

Determine the transit risks and advise accordingly.

SPECIFIC OUTCOME 2

Arrange appropriate transit insurance for international cargo.

SPECIFIC OUTCOME 3

Administer transit insurance on behalf of cargo owner.

SPECIFIC OUTCOME 4

Administer insurance claims procedures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Certify certificates of origin and other commercial documents

SAQA US ID	UNIT STANDARD TITLE		
252248	Certify certificates of origin and other commercial documents		
ORIGINATOR	PROVIDER		
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	7

SPECIFIC OUTCOME 1

Explain the reasons for the certification of Certificates of Origin and other commercial documents.

SPECIFIC OUTCOME 2

Scrutinise source documentation.

SPECIFIC OUTCOME 3

Certify certificates of origin and other commercial documents in conformity with the regulations, processes and procedures of the Issuing Body.

SPECIFIC OUTCOME 4

Create and maintain records in conformity with the minimum requirements of the Issuing Body.

SPECIFIC OUTCOME 5

Deal with queries relating to the certification of Certificates of Origin and other commercial documents.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Secure freight forwarding business**

SAQA US ID	UNIT STANDARD TITLE		
252253	Secure freight forwarding business		
ORIGINATOR	PROVIDER		
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	6

SPECIFIC OUTCOME 1

Demonstrate an understanding of the services offered by the company.

SPECIFIC OUTCOME 2

Identify potential sales targets.

SPECIFIC OUTCOME 3

Quantify and evaluate client needs.

SPECIFIC OUTCOME 4

Formulate proposal to meet client requirements.

SPECIFIC OUTCOME 5

Negotiate service offerings.

SPECIFIC OUTCOME 6

Finalise service terms and conditions.

SPECIFIC OUTCOME 7

Provide on-going support to clients.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Analyse and solve complex customs tariff classification problems

SAQA US ID	UNIT STANDARD TITLE		
252254	Analyse and solve complex customs tariff classification problems		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

SPECIFIC OUTCOME 1

Report on incorrect payments of customs duties.

SPECIFIC OUTCOME 2

Resolve customs tariff classification disputes.

SPECIFIC OUTCOME 3

Appeal against a customs tariff determination.

SPECIFIC OUTCOME 4

Resolve customs disputes.

SPECIFIC OUTCOME 5

Apply for and obtain refunds and drawbacks of customs duty.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Apply international trade systems, policies and procedures

SAQA US ID	UNIT STANDARD TITLE		
252257	Apply international trade systems, policies and procedures		
ORIGINATOR			PROVIDER
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	5

SPECIFIC OUTCOME 1

Describe and create the organisation's international trading functions.

SPECIFIC OUTCOME 2

Apply the policies and procedures of the organisation to perform international trade transactions.

SPECIFIC OUTCOME 3

Report on the results of international trading activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Gather information and report on client profitability

SAQA US ID	UNIT STANDARD TITLE		
252258	Gather information and report on client profitability		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	4

SPECIFIC OUTCOME 1

Explain the concept of profitability benchmarking.

SPECIFIC OUTCOME 2

Handle rate structure alternatives to those engaged in securing new business and retaining existing business.

SPECIFIC OUTCOME 3

Process and report on actual vs. benchmark profitability results to affected parties.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Resolve customer service problems

SAQA US ID	UNIT STANDARD TITLE		
252262	Resolve customer service problems		
ORIGINATOR	PROVIDER		
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	5

SPECIFIC OUTCOME 1

Deal with customer service problems.

SPECIFIC OUTCOME 2

Provide advice and support regarding the information received to facilitate problem solving.

SPECIFIC OUTCOME 3

Apply the best solution to resolve customer service problems.

SPECIFIC OUTCOME 4

Implement the solution to customer service problems.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform the processes and procedures for the administration of import transactions

SAQA US ID	UNIT STANDARD TITLE		
252263	Perform the processes and procedures for the administration of import transactions		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	6

SPECIFIC OUTCOME 1

Conducting import shipment activities.

SPECIFIC OUTCOME 2

Arrange payment terms and methods.

SPECIFIC OUTCOME 3

Organise service providers.

SPECIFIC OUTCOME 4

Conform to statutory requirements.

SPECIFIC OUTCOME 5

Process international trade documentation.

SPECIFIC OUTCOME 6

Administer international purchase activities.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Administer foreign exchange transactions in an international trading company

SAQA US ID	UNIT STANDARD TITLE		
252265	Administer foreign exchange transactions in an international trading company		
ORIGINATOR	PROVIDER		
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	5

SPECIFIC OUTCOME 1

Verify foreign exchange transactions.

SPECIFIC OUTCOME 2

Carry out foreign exchange receipt and payment procedures.

SPECIFIC OUTCOME 3

Report on foreign exchange transactions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Generate shipment cost estimates

SAQA US ID	UNIT STANDARD TITLE		
252266	Generate shipment cost estimates		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	6

SPECIFIC OUTCOME 1

Determine cost criteria.

SPECIFIC OUTCOME 2

Select routing structure.

SPECIFIC OUTCOME 3

Calculate and communicate estimates.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Accredit customs clearing clients**

SAQA US ID	UNIT STANDARD TITLE		
252268	Accredit customs clearing clients		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	5

SPECIFIC OUTCOME 1

Process customs accreditation application.

SPECIFIC OUTCOME 2

Rectify accreditation audit shortfalls.

SPECIFIC OUTCOME 3

Implement continuous improvement.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate; Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform international purchasing functions

SAQA US ID	UNIT STANDARD TITLE		
252269	Perform international purchasing functions		
ORIGINATOR			PROVIDER
SGB Transport and Logistics Operations			
FIELD			SUBFIELD
11 - Services			Transport, Operations and Logistics
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	7

SPECIFIC OUTCOME 1

Arrange a purchase order with an appointed supplier on receipt of requisitions.

SPECIFIC OUTCOME 2

Follow up and expedite international purchase orders.

SPECIFIC OUTCOME 3

Initiate claims procedures in respect of goods that are received lost, damaged or discrepant.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform the processes and procedures required for the administration of export transactions

SAQA US ID	UNIT STANDARD TITLE		
252272	Perform the processes and procedures required for the administration of export transactions		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	6

SPECIFIC OUTCOME 1

Plan an export transaction.

SPECIFIC OUTCOME 2

Source trade finance.

SPECIFIC OUTCOME 3

Choose service providers.

SPECIFIC OUTCOME 4

Conform to statutory requirements.

SPECIFIC OUTCOME 5

Finalise international trade documentation.

SPECIFIC OUTCOME 6

Manage export incentives.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform international trade calculations

SAQA US ID	UNIT STANDARD TITLE		
252274	Perform international trade calculations		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	6

SPECIFIC OUTCOME 1

Use factorisation techniques for the purpose of allocating costs in international trade transactions involving a number of commodities.

SPECIFIC OUTCOME 2

Apply percentage calculations in pricing negotiations, in order to determine their viability.

SPECIFIC OUTCOME 3

Explain and convert foreign currencies as part of landed and export costing calculations.

SPECIFIC OUTCOME 4

Calculate interest on amounts owing and owed to the business for the purposes of cash flow management.

SPECIFIC OUTCOME 5

Explain and calculate landed and export costing using given variables.

SPECIFIC OUTCOME 6

Perform break-even analysis.

SPECIFIC OUTCOME 7

Perform cash flow analysis as part of international project management.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59298	Further Education and Training Certificate: Freight Forwarding and Customs Compliance	Level 4	Draft - Prep for P Comment	

No. 930

5 October 2007

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

In accordance with Regulation 24(c) of the National Standards Bodies Regulations of 28 March 1998, the Standards Generating Body (SGB) for

Retail and Wholesale

registered by Organising Field 11., Services, publishes the following Qualification and Unit Standards for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the Qualification and Unit Standards. The full Qualification and Unit Standards can be accessed via the SAQA web-site at www.saq.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, SAQA House, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later 5 November 2007**. All correspondence should be marked **Standards Setting – Retail and Wholesale** addressed to

The Director: Standards Setting and Development
SAQA

Attention: *Mr. D. Mphuthing*

Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012-4831-5144

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PP

DR. S. BHIKHA

DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

National Certificate: Wholesale and Retail: Buying Planning

SAQA QUAL ID	QUALIFICATION TITLE		
59299	National Certificate: Wholesale and retail: Buying planning		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	11 - Services	Wholesale and Retail	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 5	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

The National Certificate: Wholesale and Retail: Buying Planning, NQF Level 5 addresses skills and competencies required to effectively follow a career and make use of opportunities in the buying and procurement function.

In addition to basic buying and purchasing skills, the qualification also enables the integration of associated skills within this area of operation, such as the research of local and international trends, importing, supply chain management, project management and negotiation skills.

After the successful completion of this qualification learners will be able to:

- Understand the nature and importance of the buying and planning function in the Wholesale and Retail environment.
- Plan product procurement within the context of competitor strategies, merchandising per performance, pricing, organisational target markets and product range identification.
- Calculate costing and pricing.
- Apply decision-making and negotiating skills.
- Perform buying and associated administrative activities in the area of specialisation.

Rationale:

The Wholesale and Retail environment revolves around the function of the procurement of goods for purposes of resale to end-users/consumers. Regardless of the type, volume, size or quantity of goods forming the focus of the specific Wholesale or Retail organisation, the effective planning and execution of the procurement function plays an integral part in the successful operation of a diverse range of businesses in the Wholesale and Retail sector, which include:

- Spaza/house shops.
- Independent stores.
- Chain stores.
- Small and Large wholesalers.
- Franchisers.
- Distribution Centres.
- Tele-marketing organisations.
- External contractors.

Procurement or buying requires competence across a broad range of varied work activities performed in a variety of contexts, associated with the acquisition of goods in the Wholesale and Retail environment and the qualification makes provision for the gaining of generic competencies and skills applicable to the buying planning function, whilst providing for specific areas of specialisation within the purchasing and supply chain operations environment, which may not apply across the board to all individuals responsible for the buying planning function in Wholesale and Retail environments.

The qualification is aimed at individuals presently involved in the planning and execution of procurement in organisations or individuals, previously excluded from skills development, or envisaging employment or advancement opportunities as part of a career path in the area of buying and associated functions in the Wholesale and Retail environment.

Skills and competencies gained enable further learning and refining of skills and competencies in associated vocational environments such as supply chain management, the importing of merchandise as well as financial budgeting and reporting and related administration.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED IN PLACE

It is assumed that learners accessing this qualification are competent in:

- Communication at NQF Level 4.
- Mathematical Literacy at NQF Level 4.

Specific unit standards making up the qualification assumes the completion of specific areas of learning from other unit standards embedded in the qualification.

Recognition of Prior Learning:

The structure of this Unit Standard based Qualification makes the Recognition of Prior Learning possible. Learner and Assessor will jointly decide on methods to determine prior learning and competence in the knowledge, skills, values and attitudes implicit in the Qualification and the associated Unit Standards. Recognition of Prior Learning will be done by means of an Integrated Assessment.

This Recognition of Prior Learning may allow for:

- Accelerated access to further learning at this or higher levels on the NQF.
- Gaining of credits for Unit Standards in this Qualification.
- Obtaining this Qualification in whole or in part.

All recognition of Prior Learning is subject to quality assurance by the relevant ETQA or an ETQA that has a Memorandum of Understanding with the relevant ETQA.

Access to the Qualification:

There is open access to any learner who has completed an FETC or equivalent NQF Level 4 qualification. It is required that learners are able to arrange for assessment in either a Wholesale and Retail or simulated environment.

QUALIFICATION RULES

The qualification is made up of Fundamental, Core and Elective unit standards and a minimum of 120 Credits is required to complete the qualification.

Fundamental component:

- All unit standards totalling 10 credits are compulsory.

Core component:

- All unit standards totalling 59 credits are compulsory.

Elective component:

- Learners are required to select a minimum of 51 Credits from the Elective component of the qualification.

EXIT LEVEL OUTCOMES**Exit Level Outcomes of the Qualification:**

1. Demonstrate an understanding of the Buying and Planning function in the Wholesale and Retail environment.
2. Support the procurement planning function in a Wholesale and Retail environment.
3. Conduct the Buying function in a Wholesale and Retail environment.
4. Manage the supply of stock in a Wholesale and Retail environment.
5. Apply financial practices applicable to the Buying Planning function in a Wholesale and Retail environment.

ASSOCIATED ASSESSMENT CRITERIA**Associated Assessment Criteria for Exit Level Outcome 1:**

- 1.1 The relevant legislative framework impacting on the procurement function in the Wholesale and Retail industry is explained as it applies to an organisation.
- 1.2 Policies, procedures and ethics applicable to the procurement function are correctly identified and explained as they apply to an organisation.
- 1.3 The buying cycle, supply chain, role players, their functions and the inter-relationship between functions and role-players are explained as they apply to an organisation.
- 1.4 Criteria for the sourcing, evaluation, selection and appointment of suppliers are identified and applied according to organisational policies, procedures and requirements.

Associated Assessment Criteria for Exit Level Outcome 2:

- 2.1 Planning for procurement requirements and functions are supported through the gathering, evaluation and interpretation of relevant international, industry, organisational and target market trends and information.
- 2.2 Procurement planning functions are supported through the analysis and interpretation of organisational and competitor marketing, product range and pricing strategies.
- 2.3 Organisational product ranges and pricing strategies are identified, recommended and adjusted according to merchandising performance and target market requirements.
- 2.4 Planning, execution and evaluation of negotiations with suppliers are conducted in accordance with organisational requirements.

Associated Assessment Criteria for Exit Level Outcome 3:

- 3.1 International and/or local suppliers are sourced, identified and selected according to organisational requirements and time frames.

3.2 Buying and procurement are planned, initiated, controlled and concluded according to quality assurance and organisational requirements.

3.3 Relevant administration is completed and recorded according to logistical and organisational requirements.

Associated Assessment Criteria for Exit Level Outcome 4:

4.1 Stock allocation is planned, implemented and concluded according to organisational requirements within identified time frames.

4.2 The flow of stock through the supply chain is tracked and managed to ensure optimal supply levels according to the needs and requirements of an organisation.

4.3 The efficiency of the supply of stock and supplier performance is evaluated and recommendations are made for future improvement.

Associated Assessment Criteria for Exit Level Outcome 5:

5.1 Financial forecasts, budgets and budget variances are prepared and presented in a focussed and logical manner as per organisational requirements.

5.2 Financial reports for a range of merchandise are interpreted to support a merchandising strategy.

5.3 The performance of a range of merchandise is monitored and evaluated in order to recommend and implement performance improvement actions as part of the organisational team.

5.4 Financial record keeping applicable to the Buying Planning Function in the organisation is carried out according to organisational requirements.

Integrated Assessment:

Assessment practices must be open, transparent, fair, valid, and reliable and must ensure that no learner is disadvantaged in any way whatsoever. For this purpose, an integrated assessment approach is incorporated into the Qualification. Learning, teaching and assessment are inextricably aligned. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the unit standards should be integrated through the practical application of buying planning activities in a Wholesale and Retail environment.

A variety of methods must be used in assessment and tools and activities must be appropriate to the context in which the learner is working. Where it is not possible to assess the learner in the workplace or on-the-job, simulations, case studies, role-plays and other similar techniques should be used to provide a context appropriate to the assessment.

The term 'Integrated Assessment' implies that theoretical and practical components should be assessed together. During integrated assessments the assessor should make use of formative and summative assessment methods and assess combinations of practical, applied, foundational and reflective competencies.

Assessors and moderators should make use of a range of formative and summative assessment methods. Assessors should assess and give credit for the evidence of learning that has already been acquired through formal, informal and non-formal learning and work experience.

Assessment should ensure that all Specific Outcomes, Embedded Knowledge and Critical Cross-Field Outcomes are evaluated. The assessment of the Critical Cross-Field Outcomes should be integrated with the assessment of Specific Outcomes and Embedded Knowledge.

INTERNATIONAL COMPARABILITY

The comparison with international qualifications in the area of Wholesale and Retailing was conducted by comparing the National Certificate: Wholesale and Retail Buying Planning NQF Level 5 to undergraduate programmes, outcomes of learning and performance criteria found in the qualifications forming the basis of procurement training for:

- NVQ qualifications and standards offered in Higher education in the United Kingdom and developed by the Purchasing and Supply Lead Body, accredited by the Council of Vocational Qualifications.
- The European Institute of Purchasing Management.
- The American Purchasing Society.

Three NCVQ Procurement Qualifications are available. These are:

- Level 2, identity number: Q1025815, which is aimed at procurement/purchasing assistants and junior buyers.
- Level 3, identity number: Q1025816, which targets procurement/purchasing executives or buyers.
- Level 4, identity number: Q1025817, which is aimed at Purchasing and Procurement Managers or Contracts and Supply Managers. Attaining of the Level 4 qualification, meets the corporate membership requirements of the Chartered Institute of Purchasing and Supply.

The comparison and evaluation of the standards and requirements incorporated in the NCVQ qualifications and the NC Wholesale and Retail Buying Planning Qualification indicated a good match in terms of alignment against standards and competencies predominantly from the NCVQ Levels 3 and 4, with the retaining of the competencies associated with the buying specific function as incorporated in the South African qualification, only clearly distinguished in the NCVQ Level 2.

Management specific functions as evident from the NCVQ Level 4 are not included in the National Certificate: Buying Planning Certificate Level 5 and the latter could possibly form an important focus in terms of articulation to a Diploma level qualification in the South African Wholesale and Retail context.

The South African qualifications approach chooses to avoid formal differentiation between the skills and competencies associated with the assistant and support level function and the buyer level, as is clearly the case with the NCVQ qualifications. In addition, the provision of mandatory core units and specific optional units for purposes of specialisation as evident from the NCVQ qualifications, confirms alignment in terms of the qualification approach followed for the South African qualification.

The following comparative information is provided in support of the NCVQ evaluation concluded:

NCVQ Level 2:

- Understanding of and contribution to the procurement system.
- Maintaining Service reliability requirements and supplier performance.
- Managing of the stock flow.
- Buying and acquisition and associated supplier identification/selection functions.
- Contribute to the identification of inventories, demand forecasts and material requirements.
- Monitoring implementation and reconciliation of stock levels against requirements.

NCVQ Level 3:

- Gathering and presentation of information to contribute to policies and plans development.
- Monitoring and evaluation of supplier performance and continuity of supply.
- Negotiate supplier performance improvements.

- Contribute to, award and monitor and review contract delivery.
- Negotiate supplier performance improvements.
- Contribute to, award and monitor and review contract delivery.
- Provision of information and advice through to obtaining evaluation and recording of information.
- Establish and evaluate current and future supply requirements.
- Contribute to and implement inventory changes.
- Maintain stock records and identify and reconcile discrepancies.
- Controlling of stock records.
- Determine planning, inventory and materials requirements and capacity control, delivery requirements and production schedules.

NCVQ Level 4:

- Exchange information to solve problems and make decisions.
- Provide commercial input towards decision making.
- Develop the effectiveness of procurement operations.
- Initiate and implement change and improvements in systems.
- Determine marketing conditions, organisation position, market changes and competitiveness.
- Establish contract strategy and plan.
- Identify and evaluate contactors, establish an agreement and award the contract.
- Administer the contract, maintain supplier compliance, monitor progress and close the contract.
- Improve contract performance through review and improvements in contracting.
- Establish and maintain sourcing arrangements.
- Establish supplier status and negotiate improvements in supplier performance.
- Determine viability and status of suppliers.
- Establish and evaluate current and future requirements for supply.
- Plan and reconcile inventory and materials requirements and capacity.
- Define and establish production schedules, capacities, and delivery requirements.
- Capture and forecast demand and manage materials requirements.
- Determine inventory service levels.
- Personnel management related functions such as recruitment, development, and work/task planning.

National Certificate: Wholesale and Retail: Buying Planning NQF Level 5:

- Explain the buying and planning function in terms of the legislative and organisational context and requirements.
- Research and analyse local and international trends.
- Manage the supply of stock through the supply chain.
- Work as a project team member.
- Negotiate with suppliers.
- Source, evaluate and appoint suppliers.
- Comply with organisational ethics.
- Buy merchandise for re-sale.
- Import merchandise for re-sale.
- Research local and international trends.
- Analyse and respond to merchandise performance.
- Manage the financial performance of a range of merchandise.
- Research and analyse competitor strategies.
- Determine the target market.
- Apply financial practices.
- Propose a product range for resale.
- Determine selling prices of merchandise for re-sale.

- Allocate stock to stores.

The European Institute of Purchasing Management identifies the following main competence focus areas as included in the Certified, Advanced Purchasing Courses on entry and intermediate level:

- The role of purchasing in the organisation.
- Roles and function of key role-players.
- Methodologies to diagnose a purchasing portfolio.
- Market information and analysis to support purchasing decisions.
- Purchasing strategies.
- Functional definition of requirements (structured client base needs analysis).
- Costing and pricing.
- Consolidation of needs and suppliers.
- Supplier identification, assessment and supplier appointment.
- Supplier development and relationship management.
- Negotiation processes and techniques.
- Contract development.
- Management of a purchase portfolio.
- Purchasing best practices.

The focus is predominantly on shorter learning interventions rather than a full qualification approach as focus areas for learning are provided in three-week theoretical focus periods with workplace application requirements. The evaluation did however confirm good international alignment for the National Certificate Wholesale and Retail Buying Planning NQF Level 5. A management level is also identified but was not included in the comparison for obvious reasons.

The American Purchasing society certifies against three qualifications namely:

- The Foundational Associate Purchaser Qualification.
- The Certified Purchasing Professional Qualification.
- The Certified Professional Purchasing Manager Qualification.

Each lower level qualification becomes the entry-level requirement for the next qualification. The first two levels provided excellent opportunities for comparison in terms of content alignment.

The Foundational and Purchasing Professional qualification provided relevant information to enable international comparison and supports the content and approach followed in the South African qualification as a similar skills and competence focus is clearly identifiable in terms of:

- Understanding of the buying/purchasing function.
- Integrated supply chain management focus.
- Cost management and pricing skills.
- Negotiation skills.
- Need assessment.
- Market analysis.
- Supplier selection and performance management.
- Ethical conduct.
- Basic Legislative framework.

A lot of emphasis is placed on contracting-an area not presently incorporated in the NC Wholesale and Retail Buying Planning Level 5 qualification.

Conclusion:

The evaluation indicates clearly that there is good alignment in terms of areas of learning core and specialisation skills and competencies with the National Certificate Wholesale and Retail Buying Planning NQF Level 5 and American and European qualifications and training. A comparison with the NCVQ qualifications within the context of the UK Qualifications Framework, likewise supports the conclusion that the qualification is aligned to international best practices. Differences observed are mainly due to the integration of assistant buyer and buyer level but these are specifically aligned to the needs and requirements of the South African industry and sector.

ARTICULATION OPTIONS

The qualification provides the following articulation opportunities:

The qualification provides the following articulation opportunities:

Horizontal Articulation:

Horizontal Articulation:

The qualification articulates horizontally with the following qualifications:

The qualification articulates horizontally with the following qualifications:

- National Certificate: Purchasing Management, NQF Level 5.
- National Certificate: Purchasing Management, NQF Level 5.
- National Certificate: Wholesale and Retail Operations Management, NQF Level 5.
- National Certificate: Wholesale and Retail Operations Management, NQF Level 5.

• National Certificate: Inventory and Stores Management, NQF Level 5.

Vertical Articulation:

Vertical Articulation is possible with the following qualifications:

Vertical Articulation is possible with the following qualifications:

- National Diploma: Purchasing Management, NQF Level 6.

• National Diploma: Purchasing Management, NQF Level 6.

MODERATION OPTIONS

• Anyone assessing a learner, or moderating the assessment of a learner, against this qualification must be registered as an assessor or moderator with the relevant Education and Training Quality Assurance body (ETQA), or with an ETQA that has a Memorandum of Understanding (MOU) with the relevant ETQA, or with an ETQA that has a Memorandum of Understanding (MOU) with the relevant ETQA, or with an ETQA that has a Memorandum of Understanding (MOU) with the relevant ETQA.

• Any institution offering learning that will enable the achievement of this Qualification must be registered and accredited as a provider with the relevant ETQA, or with an ETQA that has an MOU with the relevant ETQA, in which event programme approval will be obtained from the relevant ETQA.

• Assessment and moderation of assessment will be overseen by the relevant ETQA according to the policies and guidelines for assessment and moderation of that ETQA, in terms of agreements reached around assessment and moderation between various ETQAs (including professional bodies), and in terms of the moderation guideline detailed immediately below.

• Moderation must include both internal and external moderation of assessments at all exit points of the Qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described in the Exit Level Outcomes of the Qualification. The options as listed above provide the opportunity to ensure that assessment and moderation can be transparent, affordable, valid, reliable and non-discriminatory.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

- Assessors must be registered as assessors with a relevant ETQA or an ETQA that has a Memorandum of Understanding with the relevant ETQA.
- Assessors must be in possession of a relevant qualification in at a minimum of NQF Level 6.

NOTES

UNIT STANDARDS***This qualification is not based on Unit Standards.***

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	252042	Apply the principles of ethics to improve organisational culture	Level 5	5
Fundamental	252276	Explain the buying and planning functions in the wholesale and retail industry	Level 5	5
Core	252246	Analyse and respond to merchandise performance	Level 5	8
Core	252242	Determine an organisations target market	Level 5	9
Core	252251	Determine selling prices of merchandise for sale	Level 5	8
Core	252267	Negotiate with suppliers	Level 5	12
Core	252256	Propose a product range for a wholesale and retail outlet	Level 5	10
Core	252239	Research and analyse competitor strategies	Level 5	12
Elective	120379	Work as a project team member	Level 4	8
Elective	252252	Allocate stock to stores	Level 5	10
Elective	115821	Apply business financial practices	Level 5	4
Elective	252271	Buy merchandise for a wholesale and retail outlet	Level 5	15
Elective	252247	Import merchandise for a wholesale and retail outlet	Level 5	10
Elective	252270	Manage the financial performance of a range of merchandise	Level 5	15
Elective	252241	Manage the supply of stock through the supply chain	Level 5	4
Elective	252240	Research and analyse local and international consumer trends	Level 5	7
Elective	252238	Source suppliers	Level 5	10



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Source suppliers**

SAQA US ID	UNIT STANDARD TITLE		
252238	Source suppliers		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD		SUBFIELD	
11 - Services		Wholesale and Retail	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	10

SPECIFIC OUTCOME 1

Identify the factors influencing the choice of a supplier base.

SPECIFIC OUTCOME 2

Evaluate the supplier's ability to meet the requirements of an organisation.

SPECIFIC OUTCOME 3

Recommend suppliers of choice.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Research and analyse competitor strategies

SAQA US ID	UNIT STANDARD TITLE		
252239	Research and analyse competitor strategies		
ORIGINATOR	PROVIDER		
SGB Retail and Wholesale			
FIELD	SUBFIELD		
11 - Services	Wholesale and Retail		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

SPECIFIC OUTCOME 1

Analyse own and competitor's ranges.

SPECIFIC OUTCOME 2

Compare the marketing strategies of competitor and own company.

SPECIFIC OUTCOME 3

Compare the pricing strategies of competitor and own company.

SPECIFIC OUTCOME 4

Compare the value added service strategies of competitor and own organisation.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Research and analyse local and international consumer trends**

SAQA US ID	UNIT STANDARD TITLE		
252240	Research and analyse local and international consumer trends		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD		SUBFIELD	
11 - Services		Wholesale and Retail	
ABETBAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	7

SPECIFIC OUTCOME 1

Research international consumer and merchandise trends.

SPECIFIC OUTCOME 2

Research local consumer and merchandise trends.

SPECIFIC OUTCOME 3

Identify how these trends impact on a specific organisation.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Manage the supply of stock through the supply chain**

SAQA US ID	UNIT STANDARD TITLE		
252241	Manage the supply of stock through the supply chain		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD		SUBFIELD	
11 - Services		Wholesale and Retail	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	4

SPECIFIC OUTCOME 1

Identify the people involved in managing the flow of stock through the supply chain.

SPECIFIC OUTCOME 2

Manage the flow of stock through the supply chain.

SPECIFIC OUTCOME 3

Evaluate the performance of suppliers in terms of the flow of their stock through the supply chain.

QUALIFICATIONS UTILISING THIS UNIT STANDARD:

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Determine an organisations target market**

SAQA US ID	UNIT STANDARD TITLE		
252242	Determine an organisations target market		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD		SUBFIELD	
11 - Services		Wholesale and Retail	
ABET BAND	UNIT STANDARD TYPE	NQP LEVEL	CREDITS
Undefined	Regular	Level 5	9

SPECIFIC OUTCOME 1

Explain the methodology of customer categorising.

SPECIFIC OUTCOME 2

Explain the impact of various factors on the behaviour of customers.

SPECIFIC OUTCOME 3

Evaluate the product and marketing strategy of the organisation.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Analyse and respond to merchandise performance**

SAQA US ID	UNIT STANDARD TITLE		
252246	Analyse and respond to merchandise performance		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD		SUBFIELD	
11 - Services		Wholesale and Retail	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	8

SPECIFIC OUTCOME 1

Analyse merchandise performance.

SPECIFIC OUTCOME 2

Evaluate actual performance against performance forecasts for product ranges in the organisation.

SPECIFIC OUTCOME 3

Respond to merchandising analysis in the organisation.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Import merchandise for a wholesale and retail outlet**

SAQA US ID	UNIT STANDARD TITLE		
252247	Import merchandise for a wholesale and retail outlet		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD		SUBFIELD	
11 - Services		Wholesale and Retail	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	10

SPECIFIC OUTCOME 1

Explain the legislative and financial impact of importing of goods as it applies to the Wholesale and Retail sector.

SPECIFIC OUTCOME 2

Compare the impact of local and international buying as it applies to the organisation.

SPECIFIC OUTCOME 3

Analyse import procedures.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Determine selling prices of merchandise for sale

SAQA US ID	UNIT STANDARD TITLE		
252251	Determine selling prices of merchandise for sale		
ORIGINATOR			PROVIDER
SGB Retail and Wholesale			
FIELD			SUBFIELD
11 - Services			Wholesale and Retail
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	8

SPECIFIC OUTCOME 1

Explain the economic factors that impact on the selling price.

SPECIFIC OUTCOME 2

Explain other factors impacting on the selling price.

SPECIFIC OUTCOME 3

Calculate selling price.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Allocate stock to stores**

SAQA US ID	UNIT STANDARD TITLE		
252252	Allocate stock to stores		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD		SUBFIELD	
11 - Services		Wholesale and Retail	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	10

SPECIFIC OUTCOME 1

Explain organisations policies and procedures relating to the allocation of stock to stores.

SPECIFIC OUTCOME 2

Allocate stock to stores.

SPECIFIC OUTCOME 3

Evaluate stock allocation.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Propose a product range for a wholesale and retail outlet**

SAQA US ID	UNIT STANDARD TITLE		
252256	Propose a product range for a wholesale and retail outlet		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD		SUBFIELD	
11 - Services		Wholesale and Retail	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	10

SPECIFIC OUTCOME 1

Identify the factors impacting on range and product selection.

SPECIFIC OUTCOME 2

Select products from a product range.

SPECIFIC OUTCOME 3

Review a range.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Negotiate with suppliers**

SAQA US ID	UNIT STANDARD TITLE		
252267	Negotiate with suppliers		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD		SUBFIELD	
11 - Services		Wholesale and Retail	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	12

SPECIFIC OUTCOME 1

Describe processes & principles used when negotiating with suppliers

SPECIFIC OUTCOME 2

Plan to negotiate with the suppliers.

SPECIFIC OUTCOME 3

Negotiate with the suppliers.

SPECIFIC OUTCOME 4

Review negotiation with the suppliers.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Core	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Manage the financial performance of a range of merchandise

SAQA US ID	UNIT STANDARD TITLE		
252270	Manage the financial performance of a range of merchandise		
ORIGINATOR		PROVIDER	
SGB Retail and Wholesale			
FIELD	SUBFIELD		
11 - Services	Wholesale and Retail		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

SPECIFIC OUTCOME 1

Produce a financial budget for a range of merchandise to support a merchandise strategy.

SPECIFIC OUTCOME 2

Monitor the performance of a range of merchandise.

SPECIFIC OUTCOME 3

Recommend action required to improve performance.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Buy merchandise for a wholesale and retail outlet

SAQA US ID	UNIT STANDARD TITLE		
252271	Buy merchandise for a wholesale and retail outlet		
ORIGINATOR	PROVIDER		
SGB Retail and Wholesale			
FIELD	SUBFIELD		
11 - Services	Wholesale and Retail		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	15

SPECIFIC OUTCOME 1

Explain the buying policies as it applies to the operational environment.

SPECIFIC OUTCOME 2

Identify products for purchasing from the prescribed product range as it applies to an organisation.

SPECIFIC OUTCOME 3

Choose the most appropriate Supplier for the product.

SPECIFIC OUTCOME 4

Buy products and maintain buying records.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Elective	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain the buying and planning functions in the wholesale and retail industry

SAQA US ID	UNIT STANDARD TITLE		
252276	Explain the buying and planning functions in the wholesale and retail industry		
ORIGINATOR			PROVIDER
SGB Retail and Wholesale			
FIELD			SUBFIELD
11 - Services			Wholesale and Retail
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 5	5

SPECIFIC OUTCOME 1

Identify and describe the buying cycle as it applies to an organisation.

SPECIFIC OUTCOME 2

Identify the roles of role players in the buying cycle as it applies to the organisation.

SPECIFIC OUTCOME 3

Explain the effect of the external factors and trends on the buying & planning function as it applies to the organisation.

SPECIFIC OUTCOME 4

Describe the impact of the buying and planning function in the organisation.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL	STATUS	END DATE
Fundamental	59299	National Certificate: Wholesale and retail: Buying planning	Level 5	Draft - Prep for P Comment	



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