

WEBBER WENTZEL

BOWENS

15 FRICKER ROAD
JILLOVO BOULEVARD
JOHANNESBURG 2198



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REPUBLIC OF SOUTH AFRICA
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No. 27810



AIDS HELPLINE: 0800-0123-22 Prevention is the cure

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GOVERNMENT NOTICES

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

No. 732

22 July 2005



SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Agriculture and Nature Conservation

publishes the following qualifications and unit standards for public comment.

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

Comment on the qualification and unit standards should reach SAQA at the address *below and no later than 22 August 2005*. All correspondence should be marked **Standards Setting – SGB Primary Agriculture** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. Eddie Brown

Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012 – 431-5144

e-mail: ebrown@saqa.co.za



DUGMORE MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Load sugarcane infield with grab loader

SAQA US ID	UNIT STANDARD TITLE		
119849	Load sugarcane infield with grab loader		
SGB NAME	NSB 01	PROVIDER NAME	
SGB Primary Agriculture	Agriculture and Nature Conservation		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Agriculture and Nature Conservation	Primary Agriculture	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	5	Level 2	Regular

SPECIFIC OUTCOME 1

Describe the legal requirements for operating a sugarcane grab loader.

SPECIFIC OUTCOME 2

Recognise operating hazards and the role of the operator in the use of a sugarcane grab loader.

SPECIFIC OUTCOME 3

Conduct pre-starting and post-starting checks on sugarcane grab loader.

SPECIFIC OUTCOME 4

Load loose cane into transporter.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Load sugarcane with bundle loader

SAQA US ID	UNIT STANDARD TITLE		
119850	Load sugarcane with bundle loader		
SGB NAME		NSB 01	PROVIDER NAME
SGB Primary Agriculture		Agriculture and Nature Conservation	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Agriculture and Nature Conservation	Primary Agriculture
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	5	Level 2	Regular

SPECIFIC OUTCOME 1

Describe the legal requirements to comply to when operating a sugarcane bundle loader.

SPECIFIC OUTCOME 2

Recognise operating hazards and the role of the operator in the use of a sugarcane bundle loader.

SPECIFIC OUTCOME 3

Conduct pre-starting and post-starting checks on sugarcane bundle loader loader.

SPECIFIC OUTCOME 4

Offload infield trailer.

SPECIFIC OUTCOME 5

Load hilo.

No. 733

22 July 2005

PUBLIC NOTICE BY THE DIRECTORATE FOR STANDARDS SETTING AND DEVELOPMENT OF ITS INTENTION TO PUBLISH AND GAZETTE ADDITIONAL MEMBERS FOR STANDARDS GENERATING BODY (SGB) FOR SPORTS AND FITNESS IN ORGANISING FIELD 02, CULTURE AND ARTS

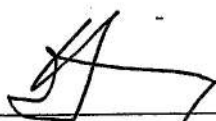
The Directorate for Standards Setting and Development intends to change the name of a registered Standards Generation Body (SGB) known as Sports and Fitness in Organising Field 02, to Sports, Recreation and Fitness.

It also intends to add the following names to the SGB.

NOMINEE	WORKPLACE	NOMINATING BODY	EXPERIENCE/ QUALIFICATIONS
Bam, Megan Ms.	University of the Western Cape	Recreation South Africa	Qualifications: <ul style="list-style-type: none"> • BA Physical Education; • Higher Diploma in Education; • BA Honours- Recreation Management; • MSc Leisure and the environments • Assessor Training Has the following experience; <ul style="list-style-type: none"> • Lecturer, Facilitator and Head Recreation Science; • Community outreach Coordinator • Executive Recreation South Africa • Recognition of Prior Learning Trained assessor and Facilitator; • Council on Higher Education Programme Evaluator; • Author Modules on Diversity Management and Conflict Resolution; • Sports Coaches outreach (Non Governmental Organisation), Programme Manager; • Project Coordinator, South Africa Sports Commission; • Principle Sport Promotion Officer, National Department of Sport and Recreation; • Assistant Sport and Recreation Officer, Bellville Municipality.

Jones, Denise Professor	University of Western Cape	University of Western Cape	Qualifications: <ul style="list-style-type: none"> • BA Human Movement, • Honours Human Movement; • MA Human Movement; • PhD Human Movement, • Diplomas Education and Special Education; Has the following experience; <ul style="list-style-type: none"> • Lecturer; • Long term Researcher in various projects; • Numerous publications and presentations – Policies in government and others, articles, papers; • Committee member and Chair of Numerous sports and recreation bodies, committees and professional bodies.
Naidoo, Maliga Ms	Recreation Management Consultants	Recreation Management Consultants	Qualifications: <ul style="list-style-type: none"> • B Pead Arts – Human Movement; • B A Honours- Human Movement; (Specialised in Recreation Management, Science, Research and Statistics); • M A Human Movement; • RECSA Training Presenter; • Parks and Recreation Education Has the following experience; <ul style="list-style-type: none"> • Teacher, Coach, Recreation Events manager; • Research Assistant, Institute of Socio Economic Research UDW; • Director, K Fun Pty; • Member, Chairperson, 35 Bodies, Committees Sport and Recreation • Was Commissioner, SA Sports Commission; • Director, Recreation Management Consultants; • Has conducted various research and written Policies for Youth Sport and

			<p>Recreation;</p> <ul style="list-style-type: none">• Has promoted, established and facilitated numerous recreation programmes, Councils, Kwazulu Natal Recreation Constitution, Civil Society Partnerships, 38 Community Based Structures;• Vice Chair Kwazulu Natal Institute of Environment and Recreation Management;• Chair Advisory Board of Sport Management, DIT;• Awarded Premiers Award in Kwazulu Natal for promoting Recreation;• Coordinator various Recreation bodies;• Has managed numerous Projects in recreation and environmental projects.
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DUGMORE MPHUTHING**ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT**

No. 734

22 July 2005

HEAD OFFICE: PRETORIA
 Postnet Suite 248
 Private Bag X 06
 WATERKLOOF
 0145
 1067 Arcadia Street
 HATFIELD
 0028
 Tel: +27 (0) 12 431-5000
 Helpdesk: 086 0103188
 Fax: +27 (0) 12 431 5039

E-mail: sqaqinfo@sqaq.org.za
<http://www.sqaq.org.za>



15 July 2005

The South African Qualifications Authority in terms of the National Standards Body Regulations (Government Gazette No. 18787) published on 28 March 1998, hereby gives notice of additional names for the following Standards Generating Body:

Additional Names for the SGB in Music: in Organising Field 02: Culture and Arts

NOMINEE	WORKPLACE	NOMINATING BODY	EXPERIENCE/ QUALIFICATIONS
Ntsihlele, Flora Dr.	Independent Researcher	Critical Interest Group	<p>Qualifications and Courses attained;</p> <ul style="list-style-type: none"> • Teacher's Associate; • Licentiate Diplomas (Pianoforte and Theory and Practice of Composition) • B. Mus • Higher Diploma Lib Sc • MA; • Dlitt et Phil <p>Has the following experience;</p> <ul style="list-style-type: none"> • Long experience Lecturer; • Conducted research African Music; • Presented National and International Papers at ethno musicological conferences; • Served on Board of Advisory Committee of the travelling Institute for Music Research; • Currently South Africa's Liaison Officer for International Council for Traditional Music.

SAQA'S MISSION

"To ensure the development and implementation of a National Qualification Framework which contributes to the full development of each learner and to the social and economic development of the nation at large"



HEAD OFFICE: PRETORIA

Postnet Suite 248

Private Bag X 06

WATERKLOOF

0145

1067 Arcadia Street

HATFIELD

0028

Tel: +27 (0) 12 431-5000

Helpdesk: 086 0103188

Fax: +27 (0) 12 431 5039

E-mail: saqa@saqa.org.za<http://www.saqa.org.za>

ENSURING QUALITY QUALIFICATIONS

Sewpaul, Naren Mr.			Qualifications and Courses attained; <ul style="list-style-type: none"> • B. Musicology; • Teacher's Licentiate in Music; • Diploma in Education; Has the following experience; <ul style="list-style-type: none"> • Has been Member of Southern African Music Society; • Has been Executive member Shane Mahony Trust; • Has been Executive member Special Arts; • Producer, Composer, various companies; • Lecturer, Educator; • Managed Community based projects; • Arts and Culture curriculum Development facilitator;
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DUGMORE MPHUTHING**ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT****SAQA'S MISSION**

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No. 735

22 July 2005

HEAD OFFICE: PRETORIA

Postnet Suite 248
Private Bag X 06
WATERKLOOF
0145
1067 Arcadia Street
HATFIELD
0028
Tel: +27 (0) 12 431-5000
Helpdesk: 086 0103188
Fax: +27 (0) 12 431 5039

E-mail: saqainfo@saqa.org.za
<http://www.saqa.org.za>



15 July 2005

The South African Qualifications Authority in terms of the National Standards Body Regulations (Government Gazette No. 18787) published on 28 March 1998, hereby gives notice of additional names for the following Standards Generating Body:

SGB: Practitioner Specialising in Development Practice in Organising Field 05: Education, Training and Development

Nominee	Workplace	Nominating Body	Experience/Qualification
Maistry, Savathrie Margie (Mrs.)	University of Fort Hare, East London Campus	Department of Social Development, University of Fort Hare	PhD candidate, MA, BA, PGCHE Incomplete, Lecturer, Programme Manager, Senior Social and Community Development worker, Tutor in Gender Studies

DUGMORE MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

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SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)

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

Human and Social Studies

publishes the following qualifications 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 qualification and unit standards can be accessed via the SAQA web site at www.saga.org.za. Copies may also be obtained from the Directorate of Standards Setting and Development at the SAQA offices, Hatfield Forum West, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the qualification and unit standards should reach SAQA at the address *below and no later than 22 August 2005*. All correspondence should be marked **Standards Setting – SGB Archaeology** and addressed to

The Director: Standards Setting and Development
SAQA
Attention: Mr. Eddie Brown
Postnet Suite 248
Private Bag X06
Waterkloof
0145
or faxed to 012 – 431-5144
e-mail: ebrown@saqa.co.za


DUGMORE MPHUTHING
ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

National Certificate: Archaeology

SAQA QUAL ID		QUALIFICATION TITLE	
49772		National Certificate: Archaeology	
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
QUAL TYPE		FIELD	SUBFIELD
National Certificate		Human and Social Studies	Traditions, History and Legacies
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUALIFICATION CLASS
Undefined	120	Level 3	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

The purpose of the Qualification is to build the technical knowledge and skills required by field assistants, workers on archeological sites and learners as part of the implementation of the National Skills Strategy. It provides the opportunity for learners to obtain recognition for formal and extended training in the techniques and goals of archaeology. It is intended to empower learners to acquire knowledge, skills, attitudes and values required to operate confidently as workers in the South African community and to respond to the challenges specific to the archaeological environment. It will open career opportunities for learners in Museums, Universities and Private Contractor Organisations undertaking impact assessments and mitigation, and may be useful for learners in Travel and Tourism.

The Qualification provides a balanced, holistic learning experience that allows flexible access to further education, lifelong learning and to productive employment in archaeology, geological field work and heritage related positions for learners who are not archaeologists in their own right. A category of membership has been created by the Association of Southern African Professional Archaeologists (ASAPA) for learners who achieve the National Certificate: Archaeology: Level 3. This should make the Qualification attractive to amateur practitioners or recreational archaeologists.

Rationale for the qualification:

The National Certificate: Archaeology: Level 3 is designed to meet the needs of learners with little or no formal training who currently work in archaeological related positions, such as field and museum assistants. It provides a broad knowledge of the basics of archaeological excavation and recording. It focuses on practical experience and skills with limited library and archival research for people in museums, universities, archaeological sites and laboratories who are required to select appropriate procedures to solve problems within given parameters and who operate within clearly defined contexts. The intention is:

- > To provide a general knowledge of archaeological methods and history specific to southern Africa.
- > To ensure that high standards of work are undertaken.

The National Certificate: Archaeology: Level 3 could be offered in formal education or as occupational-directed workplace based training for learners already employed on archaeological sites, at universities and in laboratories and museums and for learners in learnership programmes. The practical skills would also be useful for university students whose courses have not included field work and for recreational archaeologists/amateur practitioners who assist on excavations as volunteers. As most field skills in archaeology are acquired on the job, institutions that offer the Qualification will need to have access to an archaeological site.

Qualifying learners should be knowledgeable about and competent in:

- > Using archaeological equipment in surveying, excavating, recording and rehabilitating a site.
- > Applying knowledge of safety procedures at a specific site.
- > Identifying materials commonly found at archaeological sites in Southern Africa and classifying them according to commonly accepted archaeological categories.
- > Recording artefacts and/or excavation features at an archaeological site and /or in a laboratory.
- > Behaving ethically and within appropriate legal parameters at an archaeological site and workplace.
- > Understanding site formation processes and key aspects of the human past.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED TO BE IN PLACE

It is assumed that learners are competent in Communication and Mathematical Literacy at NQF Level 2.

Recognition of prior learning:

- > The National Certificate: Archaeology: Level 3 allows open access. Provision has been made for prior learning to be recognised if a learner is able to demonstrate competence in the knowledge, skills, values and attitudes implicit in this Qualification. Application for Recognition of Prior Learning (RPL) should be made to a relevant accredited ETQA.
- > Credit towards a Unit Standards is subject to quality assurance by a relevant accredited ETQA and is conducted by a workplace assessor.
- > This Qualification can be obtained in part or in whole through Recognition of Prior Learning.
- > RPL will be done using a range of assessment tools and techniques that have been jointly decided upon by the learner and the assessor.
- > The same principles that apply to assessment of the Qualification and its associated Unit Standards apply to RPL.

ACCESS TO THE QUALIFICATION

There is open access to this Qualification bearing in mind the Learning Assumed to be in Place.

QUALIFICATION RULES

Level, credits and learning components assigned to the qualification:

The Certificate is made up of a planned combination of learning outcomes that have a defined purpose and will provide qualifying learners with applied competence in the techniques and goals of archaeology.

The Qualification is made up of Unit Standards that are classified as Fundamental, Core and Elective. A minimum of 120 credits is required to complete the Qualification.

In this Qualification the credits are allocated as follows:

- > Fundamental - 36 credits
- > Core - 59 credits
- > Electives - 25 credits
- > Total - 120 credits

Motivation for the number of credits assigned to the Fundamental, Core and Elective Components

Fundamental Component (All are compulsory)

There are twenty credits allocated to Communication and sixteen credits to Mathematical Literacy at the level of the Qualification to enable learners to communicate effectively with others in the work situation. The Mathematical Literacy will help learners to solve problems related to the work situation and personal lives.

Core Component (All are compulsory)

Fifty nine credits have been allocated to Unit Standards designated as Core for the purpose of this Qualification. The Unit Standards classified as Core provide the basic knowledge and skills that all

workers need to know to operate as field assistants on an archaeological site and for people in museums, universities, archaeological sites and laboratories. They provide an opportunity to develop knowledge of archaeology through practical experience and the application of knowledge, research and study skills and ensure that the Qualification has a strong archaeological focus. All the Unit Standards indicated as Core are compulsory.

Elective Component

Learners are required to select Electives that add up to at least 25 credits. The Unit Standards may be selected from the allocated list of Electives and may relate directly to the learner's work or may be life skills to enhance personal development and employability.

Other Unit Standards that are relevant to Archaeology may also be included as electives subject to the approval of the relevant ETQA.

EXIT LEVEL OUTCOMES

The National Certificate: Archaeology: Level 3 is intended for personnel already employed in museums, universities, archaeological sites and laboratories and amateur or recreational archaeologists who assist at excavations on a voluntary basis. The focus is on basic operational knowledge, an understanding of the archaeological excavation environment and an ability to select appropriate processes and procedures to solve problems and make decisions within clearly defined contexts. Learners are required to apply literacy and numeracy skills to a range of different contexts. They are expected to collect, organise, summarise, interpret and report information from a range of sources and to take a position on available information, discuss issues and explain their standpoints coherently in spoken and written form. Work on an excavation site and in museums, universities, archaeological sites and laboratories is strictly under the supervision of the Archaeologist.

Learners should have the capacity to work within a managed environment. They should be able to manage their time effectively and have the capacity to contribute actively to a team's effectiveness.

The Exit Level Outcomes and their Associated Assessment Criteria are the following, which means that the learner will be capable of:

1. Using archaeological equipment in surveying, excavating, recording and rehabilitating a site and representing findings and/or excavation features spatially
2. Identifying and classifying materials commonly found at archaeological sites in Southern Africa and understanding key aspects of the human past
3. Applying knowledge of safety procedures at a specific site
4. Behaving ethically and within appropriate legal parameters at an archaeological site and workplace

Critical Cross-Field Outcomes:

The learner can demonstrate ability to:

- > Identify and solve problems in which responses show that responsible decisions have been made in selecting appropriate tools and dealing with unexpected challenges on the site.
- > Work effectively with others as a member of a team, in that field assistants and people in museums, universities, archaeological sites and laboratories work as members of a team and learners would not work on their own.
- > Organise and manage oneself and one's activities responsibly and effectively in keeping own work area clean and clear and maintaining own excavation tools.
- > Collect, organise and critically evaluate information in classifying, labeling and recording findings.
- > Communicate effectively when working with others.
- > Use science and technology effectively and critically showing responsibility towards the environment and the health of others in selecting and using equipment appropriately.

- > Demonstrate an understanding of the world as a set of related systems by recognising the consequences of destroying or misplacing evidence.

Exit points for learners who do not complete a Qualification:

- > Learners will be credited with Unit Standards in which they have proved competence.
- > Learners who complete individual Unit Standards but do not complete this Qualification retain their credits. However, should the substance of the Unit Standards change, the validity of the credit towards the Qualification may be reviewed.
- > Learners who change their provider or learning site before completing the Qualification may transfer their credits to the new learning site.

ASSOCIATED ASSESSMENT CRITERIA

1.
 - > Appropriate equipment is selected and used for different purposes on an excavation site with due regard for safety.
 - > Information and/or findings are recorded correctly.
2.
 - > A range of archaeological materials is classified to establish patterns of human activities in the past.
 - > Instructions of the professional archaeologist are followed accurately.
 - > Changes in the deposit are identified and reported using laid down procedures.
3.
 - > The necessary precautions are applied in accordance with the safety requirements of a specific site.
 - > Tools are used correctly with regards to safety requirements and procedures.
4.
 - > Behaviour on site is in accordance with the Archaeologists' Code of ethics and standards for best practice.
 - > Archaeological Code of Ethics is applied in dealing with artefacts and people on the site.
 - > Standards are applied in dealing with artefacts and excavations.

Integrated assessment:

Before The National Certificate: Archaeology: Level 3 is awarded, learners are required to demonstrate competence in the required Unit Standards and complete a summative assessment based on the exit outcomes of the Qualification.

INTERNATIONAL COMPARABILITY

Archaeology is a discipline encompassing many sub-disciplines, each of which has globally recognised best practices and qualifications. The National Certificate: Archaeology: Level 3 utilises international and locally recognised best practice and standards to afford a measure of international comparability.

Several countries in the English-speaking world offer vocational training for a number of careers. Amongst these are the countries of the United Kingdom, Australia and New Zealand. Archaeological training and qualifications are still largely provided at universities and colleges and aimed at under- and post-graduates.

UK and Europe

Concerted attempts have been made to implement a system of vocational qualifications for archaeology in the UK by the Institute of Field Archaeologists (IFA) under the auspices of the Archaeological Training Forum (ATF). The suggested system is synthesized in the document "The future of archaeological training and career development - Roles and skills in archaeology". National Occupational Standards (NOS) developed by the Cultural Heritage National Training Organisation (CHNTO) have been developed and are broadly consistent with the topics and standards that have been developed for archaeology in South Africa. The CHNTO standards are being implemented by commercial firms and organisations involved in Heritage Management as a means of assessing the experience of workers.

The Nautical Archaeology Society in the UK (nas.nasportsmouth.org.uk) has developed a well-planned Certificate in Foreshore and Underwater Archaeology for which credits can be accumulated in stages from an introductory course to a Part IV Advanced Certificate. The same qualification is offered in South Africa through the accredited South African Heritage Resources Agency (SAHRA) (contact:

jgribble@sahra.org.za). The SAQA Unit Standard at Level 3, Investigate a maritime site is based on the NAS Introduction to foreshore and underwater archaeology and the NAS Part I Certificate.

The Council for British Archaeology (CBA) has been leading a campaign against the decision by the AQA examination board to drop its GCSE Archaeology course that gives school learners a background knowledge of archaeological methods and the early history of Britain. The main reasons given for dropping the course were the relatively small number of candidates who chose the option and the lack of school teachers with appropriate training. Teacher training in Archaeology will therefore be introduced at some training colleges.

In addition, the European Association of Archaeologists (EAA), which has members in most of the EU countries, aims to promote high standards in archaeological work, as members commit themselves to defined principles and requirements to carry out their work to the highest standards recognised by their professional peers. Projects currently funded by the EU are actively promoting translational training which brings together archaeologists and archaeological site managers or presenters from across Europe. It is inevitable that a system for ensuring consistent training and standards will have to be developed for Europe, specifically the EU countries.

South Africa

In South Africa, archaeological training is provided at under- and post-graduate levels at the universities of Cape Town, Witwatersrand, Pretoria and UNISA, with modules offered at the universities of Fort Hare and Venda. A post-graduate Diploma and Masters course in Rock Art Studies is offered at the Rock Art Research Institute at the University of the Witwatersrand. The emphasis is still placed on academic training with formal practical training forming a very small part of the overall programmes. Dedicated learners can also access training through participation on commercial contract-based archaeological projects, although no formal training generally takes place owing to time and cost pressures. There are currently no standards to ensure consistency of training, or to judge practical competence of the learner on completion of the degree. Degrees in archaeology issued by South African universities are widely recognised throughout the world and annually attract post-graduate students from numerous foreign universities.

Rest of Africa

Degrees in Archaeology are offered within History departments at the University of Namibia, the University of Botswana, and the University of Zimbabwe and at universities in Tanzania, Kenya, Uganda, Nigeria, Benin and Senegal. As far as could be ascertained, however, there are no African countries that offer practical courses equivalent to the proposed National Certificate in Archaeology. The only possible equivalent is a field school operated for about 6 weeks each year by Professor Jack Harris and his colleagues at Rutgers University in the USA at archaeological sites in Kenya. It is attended mostly by paying American students who receive credits for participation. The course covers most of the specific outcomes listed in Unit Standards that are Core in the National Certificate: Archaeology: Level 3.

Non-qualifying courses in Africa

A series of technical courses on the inventory, documentation and management of immovable cultural heritage have been arranged by ICCROM in alternate years in Mombassa in English and in Benin and Cameroon in French as part of the AFRICA-2009 programme. Countries that are members of ICCROM, a UNESCO-related organisation based in Rome, may nominate one or two participants for these courses which are run over three months. All expenses are paid and participants receive a certificate of attendance.

As the courses are focused mostly on management of sites and databases, they do not include the practical skills that form the backbone of the SAQA Unit Standards for Archaeology, but provide very useful experience in teamwork and heritage management in the African continent.

Internships

The International Council of African Museums (AFRICOM) offers 8-week internship opportunities to museum professionals in Africa in a museum or related heritage organisation. This programme would assist learners doing the elective for archaeological laboratory assistants, Demonstrate ability to process and curate archaeological material in a laboratory environment. Details are available from the website www.africom.museum. Other heritage studies courses that focus on museums are listed on www.wave.co.nz/~jollyroger/Africa/africa.html.

Background and rationale for the choice of countries for comparison of the National Certificate:

Archaeology: Level 3

This comparison is based on the web sites that provided access to vocational based standards for the comparison in the United Kingdom and the United States of America.

UK: The Cultural Heritage National Training Organisation (CHNT) at www.chnto.co.uk provides a full suite of cultural heritage and archaeological national occupational Unit Standards that enable a thorough comparison. The web site indicated that NQF standards have also been developed from levels 2 - 4, but have not been widely taken up by the industry - see excerpt below from: "Project to define professional functions and standards in archaeological practice".

"NVQs and SVQs: It remains an open question as to whether NVQs and SVQs will find a market within the profession. In the short and medium term, unless there is some external driver that makes this a requirement it is difficult to see from where demand will come. However, the occupational standards and unit structure is compatible with the Requirements of QCA and SQA and a qualification structure based on these has been proposed. Our analysis of occupations has concluded that the majority of activities fall broadly within levels 4 and 5 of the National Qualifications Framework (NQF) and it is possible to group the units to fit with a range of roles which typify current employment. There are however constraints on developing full NVQ/SVQ awards'.

Further research on the QCA website indicated that the level 2 - 4 NQF related archaeological qualifications were not registered or listed and it appears that the NOS standards are the leading standards in the industry. The full sets of standards were available for download.

The Levels of the NOS standard are not clearly indicated on the website, however, on analysis it is evident that these standards are at a higher level than the South African Unit Standards. There are some common competencies and outcomes, but the levels of complexity are very different.

USA: The National Park Services (NPS) provides fully accredited training programmes for archaeologists working across US Parks. The curriculum of course outcomes and competencies per job role may be found at www.nps.gov/training.

The National Park Service's Archaeology-Interpretation Shared Competency Course of Study is a recent initiative to coordinate vocational training in association with the NPS Mather Training Centre. The Course of Study is designed to meet newly revised competency-based standards and strategies for NPS-sponsored training courses. The goals are to strengthen the relationship between archaeology and public interpretation and ultimately to improve how archaeology is presented to the public. Archaeologists, interpreters, and educators are collaborating in developing a course of study curriculum that will be used by NPS in training employees in three career fields. Employees will be trained together in the skills and abilities (shared competencies) needed to carry out a successful interpretation program. Among the main precepts of the curriculum are the needs for interdisciplinary communication and for sensitive interpretation to multicultural audiences.

The course of study is entitled "Effective Interpretation of Archeogonia Resources: The Archaeology-Interpretation Shared Competency Course of Study." A detailed outline of the training module, Module 440, is posted on the NPS Interpretive Development web site as well as the SEAC Web site. The Archaeology-Interpretation Shared Competency Course of Study Module was developed by an interdisciplinary team of interpreters and archaeologists in association with the NPS Albright Training Centre and Mather Training Centre. Two recent outcomes of the training module have been the development of the "Archaeology for Interpreters" and "Interpretation for Archaeologists" distance learning knowledge guides. These and other background resources are used in a Service-wide interdisciplinary 40-hour training course.

The site lists all the career streams in the NPS and the associated career paths and associated competence for each role. The relevant job roles include that of Archaeological Technician, which is comparable to the role of Field Assistant indicated in the South African qualification although the cognitive complexity required of an Archaeological Technician is at a higher level.

Archaeological technicians are specialists in archaeology-related fields such as photography; fieldwork, excavation, surveying and mapping; artefact collection, cleaning, sorting and labeling; automated data base management; field logistics; equipment management; and other assistance functions. Technicians possessing the competencies of this level have the knowledge and analytical skills equivalent to an advanced undergraduate educational level or a Bachelor's Degree in anthropology, archaeology, history, or a related field with specialised training in archaeology. Archaeological technicians perform under the direct supervision of a professional archaeologist and gain field experience as part of an archaeological field crew

or field school.

See Addendum 1 for the 4 competency levels in the USA qualification. (Refer to qualification notes)

Detailed Comparison

> Mathematical Literacy

- > Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations.
- > Use mathematics to investigate and monitor the financial aspects of personal, business and national issues.
- > Investigate life and work related problems using data and probabilities.
- > Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts.

From the documentation on the CHNTO (UK) And NPS (USA) mathematical literacy standards do not appear to be included in the qualifications. However, there are the equivalent of SAQA Fundamentals, referred to as Key Skill Units, on the NVQ in the UK and that there are mathematical key skills units from levels 1 - 4 in the UK with work based evidence as requirements.

> Communication

- > Accommodate audience and context needs in oral communication.
- > Interpret and use information from texts.
- > Write texts for a range of communicative contexts.
- > Use language and communication in occupational learning programmes.

From the documentation on the CHNTO (UK) And NPS (USA) communication standards do appear to be included in the UK or USA qualifications. However, the equivalent of SAQA Fundamental Communication Unit Standards are referred to as Key Skill Units on the NVQ in the UK and that there are communication key skills units from levels 1 - 4 in the UK with work based evidence as a requirement.

US - NPS Standard -Communication competencies contextualised to the role are included in the Archaeologist entry level. These competencies are at a higher level of complexity than the SA standards and require:

- > Writing: Ability to prepare limited scale scientific reports that will disseminate the cultural resource data derived from projects in accordance with service and agency policies. Knowledge of basic techniques of writing technical and professional reports on the results of archaeological surveys that meet professional and National Park Service standards. Administrative skills such as preparing scopes of work, cooperative agreements, and contracts.
- > Public Interpretation/Presentation/Outreach includes in its competencies.
 - > Basic knowledge of techniques of conveying technical archaeological information to the lay public.
 - > Ability to work as a team member in the design and implementation of effective public interpretation programs such as popular histories, brochures, pamphlets, videos, exhibits, posters, lesson plans, and other public interpretation devices.
 - > Knowledge of public speaking techniques.

> Core

- > Identify evidence of past human activity.

UK - CHNTO Archaeological practice Standards.

AE1 Characterise the archaeological resource and recommend action, AE2 Assess options for conserving the archaeological resource in situ and AE3 Identify and describe archaeological items have synergies with the South African Unit Standard in some of the criteria in terms of identifying and classifying archaeological material. The performance criteria are respectively:

- > AE1.1 Describe the archaeological resource.
- > AE1.2 Describe what data the resource has the potential to reveal.
- > AE1.3 Describe the potential significance of the archaeological resource.
- > AE1.4 Evaluate options and recommend action.
- > AE2.1 Explore and evaluate options for conserving the archaeological resource in situ.
- > AE2.2 Define the risks of conserving the archaeological resource in situ.

- > AE2.3 Recommend strategies for conserving the archaeological resource in situ.
- > AE3.1 Provide a description of an item.
- > AE3.2 Identify and classify an item.
- > AE3.3 Describe the potential significance of an item as an archaeological resource.

> Demonstrate techniques to prepare a site for excavation and to rehabilitate an archaeological site and Use and maintain basic excavation tools and equipment.

UK - CHNTO Archaeological practice Standards: AC2 Conduct non-intrusive investigations, AC3 Contribute to non-intrusive investigations, AC4 Conduct intrusive investigations and AC5 Contribute to intrusive investigations have synergies with the SA standards.

US - NPS Standards Archaeologist Entry level: Preservation, Treatment, and Maintenance.

- > Assists in planning and implementing archaeological projects and provides technical assistance.
- > Hands-on experience in recording soil depositional sequences, site formation processes, agents of deterioration, and recommendations for enhanced documentation, treatment, monitoring, and protection programs.
- > Knowledge of applicable management documents such as area management reports and preservation plans.

> Participate effectively in a team or group and describe how to manage workplace relationships.

US - NPS Standards Archaeologist Entry level: Universal Competencies Team Work is a Universal competency foundational to the Entry level of NPS Standard and B. Public Interpretation/Presentation/Outreach includes in its competencies.

> Ability to work as a team member in the design and implementation of effective public interpretation programs such as popular histories, brochures, pamphlets, videos, exhibits, posters, lesson plans, and other public interpretation devices.

> Interpret spatial information from maps and other sources.

US - NPS Standards Archaeologist Entry level: Laboratory Analysis/Conservation of Field Collections require the ability to interpret spatial information from maps and other sources:

> Ability to assist other professional archaeologists in preparing site information for updating the Archaeological Sites Management Information System (ASMIS), the Cultural Sites Inventory (CSI); the NPS Geographic Information System (GIS); and the Automated National Catalogue System (ANCS+).

> Skills in photography, dark room techniques, and graphic recording techniques to prepare photographs and other visual displays for recording the results of archaeological surveys, and preparing acceptable reports.

> Explain basic legal and ethical principles that apply to archaeology.

US - NPS Standards Archaeologist Entry level: Universal Competencies Fundamental Values are Universal competencies foundational to the Intermediate level of NPS Standard.

> Apply problem solving techniques to make a decision or solve a problem in a real life context.

US - NPS Standards Archaeologist Intermediate level: Universal Competencies: Problem Solving is a Universal competency foundational to the Intermediate level of NPS Standard.

> Manage time effectively to enhance productivity and enable a balanced lifestyle.

UK - CHNTO Archaeological practice Standards: AK3 Develop your own resources and protect the interests of others - Performance criteria 3.2. Relates to time management competencies as set out below.

AK3.1 Develop yourself to improve your performance.

AK3.2 Manage your own time and resources to meet your objectives.

AK3.3 Contribute to the protection of individual and community interests.

> Render basic assistance to an ill or injured person in an outdoor or field situation and Contribute to the health, safety and security of a fieldwork environment/ workplace.

UK - CHNTO AJ9 Reduce risks to health and safety in the workplace and AJ10 Contribute to health and safety in the workplace have synergies with the South African Unit Standards. Learners are required to:

- > AJ9.1 Develop procedures for maintaining a healthy and safe workplace.
- > AJ9.2 Identify the hazards and evaluate the risks in your workplace.
- > AJ9.3 Reduce the risks to health and safety in your workplace.
- > AJ9.4 Review the effectiveness of health and safety procedures in your workplace.
- > AJ10.1 Operate safely in the workplace.

- > AJ10.2 Respond to emergencies.
- > AJ10.3 Assist in the security of the workplace.

US - NPS Standards Archaeologist Entry level: VIII. Safety.

- > Insures on-the-job safety and health of all employees.
- > Knowledge of on-the-job safety and health considerations of the work place.
- > Knowledge of job safety and health hazards and safety requirements for job assignments.

> Investigate potential hazards in a local context and suggest possible ways to minimise their spatial impact.
UK - CHNTO - AJ8 Prepare for potential disasters.

AJ8.1 Conduct a risk assessment.

AJ8.2 Develop a disaster plan.

AJ8.3 Implement disaster readiness measures.

The Entry level competencies for the NPS assume knowledge and analytical skills equivalent to an advanced undergraduate educational level or a Bachelor's Degree in anthropology, archaeology, history, or a related field with specialised training in archaeology. Therefore it can be assumed that the Unit Standards below would be covered in these courses of study:

- > Apply knowledge of how archaeological deposits accumulate to the excavation process.
- > Investigate key aspects of the human past in Southern Africa.
- > Demonstrate techniques for gathering and presenting fieldwork data.

> There is no clarity on whether the outcomes of the SA Unit Standard Apply knowledge of HIV/AIDS to a specific business sector and a workplace are included in any of the competencies across the qualifications compared, although they could be included in the US occupational health and safety standards.

> Electives

> Research a southern African archaeological site from published and unpublished material.

UK - CHNTO AC1 Research and analyse information to achieve objectives The UK NOS standard has synergies with the SA standard, with the UK standard focusing on the following performance criteria:

AC1.1 Identify sources and availability of information.

AC1.2 Collect information to achieve research objectives.

AC1.3 Analyse research information.

AC1.4 Report results.

US - NPS Standards - Research Under the direct supervision of a professional archaeologist, the entry level archaeologist conducts basic research on archaeological topics and participates in archaeological surveys and excavations and documents all work in accordance with professional standards. Archaeological Investigations require:

- > Ability to conduct small-scale, limited scope archaeological investigations using a variety of techniques and preparing a wide range of archaeological documentation.
- > Ability to assist other professional archaeologists in conducting archaeological monitoring, surveys, and excavations; including the location of sites, recording of archaeological and environmental data, and summarisation of information collected.
- > Knowledge of the techniques involved in maintaining field notes and preparing field descriptions, drawings, map, surveying instruments and their appropriate uses, photographs, and video recordings related to the archaeological fieldwork.
- > Knowledge of basic professional procedures in organising hard and digitally generated records such as site files, base maps, and other data.
- > Knowledge of basic professional procedures and operations in conducting archaeological item monitoring, archaeological surveys, archaeological investigations and testing.
- > Knowledge of local and regional prehistory and/or history needed to assist in analysing and processing archaeological data and material resulting from fieldwork.

> Create a visual record of artefacts and features for archiving or publication and Demonstrate ability to process and curate archaeological material in a laboratory environment.

US - NPS Standards Archaeologist Entry level: Laboratory Analysis/Conservation of Field Collections

> Carries out limited scope laboratory procedures, including analysing, accessioning, cataloguing, and preserving artefacts, and data generated by the field activities.

> Ability to assist other professional archaeologists in preparing site information for updating the

Archaeological Sites Management Information System (ASMIS), the Cultural Sites Inventory (CSI); the NPS Geographic Information System (GIS); and the Automated National Catalogue System (ANCS+).

> Knowledge of laboratory analysis and artefact curation to accession, catalogue, analyse, and preserve artefacts and data generated by the survey.

> Skills in photography, dark room techniques, and graphic recording techniques to prepare photographs and other visual displays for recording the results of archaeological surveys, and preparing acceptable reports.

The following UK NOS and NPS standards have synergies with the SA standards in terms of curation and care of archaeological items.

UK - CHNTO Archaeological practice Standards: The following UK NOS standards have synergies with the SA standards in terms of curation and care of archaeological items, but are at a higher level. AC6 Store items and ACL Transfer items have synergies with the proposed SA standard in terms of:

> AC6.1. Identify the appropriate environment in which to maintain and protect items.

> AC6.2 Controlling the environment to preserve and protect items.

> AC7.1 Identify the handling requirements of an item.

> AC7.2 Pack an item for transportation to a new location - Not specified but inferred in the sorting for SA Specific Outcome 1.

> AC7.3 Monitor the transportation of items - this is not specific to the SA standard although AC 3.3. identifies threats to stored metals.

> AC7.4 Monitor the installation of items within a new location (Archiving Systems - specific outcome 4).

AE4 Develop conservation plans for items, AE5 Develop and implement preventive conservation procedures for items, AE6 Apply preventive care procedures to items, AE7 Develop and implement remedial conservation procedures for items and AE8 Implement routine interventive conservation procedure. The performance criteria for the UK standards are:

> AE4.1 Explore conservation options for items.

> AE4.2 Specify conservation options for items.

> AE5.1 Specify the appropriate environment in which to maintain and protect items.

> AE5.2 Monitor, evaluate and advise on the environmental protection of items.

> AE6.1 Control the environment to preserve and protect an item.

> AE6.2 Monitor and modify the environment and the condition of an item.

> AE7.2 Minimise the deterioration of items.

> AE8.1 Apply routine stabilisation.

> AE8.2 Implement routine cleaning and repair.

US - NPS Standards Archaeologist Entry level: Laboratory Analysis/Conservation of Field Collections.

> Carries out limited scope laboratory procedures, including analyzing, accessioning, cataloguing, and preserving artefacts, and data generated by the field activities.

> Ability to assist other professional archaeologists in preparing site information for updating the Archaeological Sites Management Information System (ASMIS), the Cultural Sites Inventory (CSI); the NPS Geographic Information System (GIS); and the Automated National Catalogue System (ANCS+).

> Knowledge of laboratory analysis and artefact curation to accession, catalogue, analyse, and preserve artefacts and data generated by the survey.

> Skills in photography, dark room techniques, and graphic recording techniques to prepare photographs and other visual displays for recording the results of archaeological surveys, and preparing acceptable reports.

The Entry level competencies for the NPS assume knowledge and analytical skills equivalent to an advanced undergraduate educational level or a Bachelor's Degree in anthropology, archaeology, history, or a related field with specialised training in archaeology. Therefore it can be assumed that some of the outcomes and assessment criteria from the following Unit Standards would probably be covered in the course:

> Recover of hominid and/or faunal remains from a hard matrix.

> Recover human skeletal remains for analysis.

> Classify faunal remains prior to analysis.

> Investigate a maritime site.

> Record a rock art site.

> Demonstrate knowledge of Stone Age archaeology.

> Demonstrate knowledge of Iron Age archaeology.

> Demonstrate knowledge of archaeology applied to Colonial sites.

> Computer Literacy

UK: CHNTO: It is not clear whether computer literacy skills are included in the lower level archaeology qualification but, information technology skills are compulsory key skills in the NVQ. There is a full set of NOS standards relating to computer literacy.

US - NPS Standards - Research Under the direct supervision of a professional archaeologist, the entry level archaeologist conducts basic research on archaeological topics and participates in archaeological surveys and excavations and documents all work in accordance with professional standards. Archaeological Investigations: the following knowledge requirement infers computer literacy:

> Knowledge of basic professional procedures in organizing hard and digitally generated records such as site files, base maps, and other data.

> Financial Literacy

US - NPS Standards Archaeologist Intermediate level: There do not appear to be any personal financial literacy competencies required at Entry level or Development Level. However at development level there are Universal competencies of "Resource Stewardship" and at Full Level Competency "Contracting and Procurement" is defined as a general competency, which would have financial literacy competencies.

No equivalents found for:

- > Investigate credit in own circumstances.
- > Use a personal budget to manage own money.
- > Examine the costs and benefits of using banking institutions for managing personal finances.
- > Investigate ways of managing financial risk in own lives.
- > Interpret basic financial statements.

> Personal Development

No equivalents found for:

- > Explain the impact of personal wellness on work performance.
- > Identify ways of managing relationships in own life.
- > Identify risks associated with substance abuse and dependency in own life.
- > Investigate the need to provide financially for own retirement.

Conclusion

There is reference to lower level qualifications on the NVQ (UK) that would have been more suitable for the comparison - however since these were unavailable for comparison and are evidently not as widely adopted by the industry as the NOS standards, it would appear that the standards in use in the UK are far more complex than the standards that are proposed on the SA qualification. The SGB was able to match many of the outcomes and competencies (at different levels of complexity) to the UK Occupational Standards. The US standards used for comparison listed competencies by job role as apposed to outcomes. In the US a degree in archaeology is foundational to the continuous development of the archaeologist even at the lower end of the jobs, i.e. technician level. It appears that the National Certificate: Archaeology: Level 3 is a world first in providing for on the job vocational acquisition of competencies below the level of a first degree.

While there are references to lower level standards on the UK framework for cultural heritage standards, these cannot be accessed from the website and it appears that they are not in use by the industry, as the Occupational Standards have more weight. Similarly in the US the standards are occupationally based rather than outcomes based. It appears that the competencies covered in the proposed SA archeologically qualification exist as a body of intellectual property in the world at large, but are not catered for as a learning pathway in terms of skills programmes and qualifications. If there are any such qualifications, they are not widely published on the Internet and the SGB has not been able to access such Unit Standards for the comparison.

ARTICULATION OPTIONS

This Qualification articulates horizontally with:

- > Vocational qualifications at Level 3 on the basis of the Fundamentals.

It articulates vertically with:

- > FETC: Heritage Practice ID 48812.
- > National Certificate in Management: Level 4 ID 23656.
- > Fundamental Competencies gained in Communication and Mathematical Literacy in this Qualification will enable the learner to access any Qualification at NQF Level 4 in which he/she shows an interest.

MODERATION OPTIONS

This Qualification will be internally assessed and externally moderated by a moderator registered by a relevant accredited ETQA or an ETQA that has a Memorandum of Understanding with the relevant accredited ETQA.

- > Moderators, competent at the level of the Qualification, are registered by a relevant accredited ETQA to ensure that the standard across assessors is consistent.
- > Moderators must be registered as assessors with the relevant ETQA.
- > Moderators are required to report to a relevant accredited ETQA.
- > A relevant accredited ETQA will monitor and quality assure moderation and assessment according to guidelines in the Qualification.

Criteria for registration of internal and external assessors in the sub-field

This Qualification will be internally assessed by the provider and moderated by a moderator registered by a relevant accredited ETQA or an ETQA that has a Memorandum of Understanding with the relevant accredited ETQA.

- > Assessors must be registered as assessors with a relevant accredited ETQA.
- > Assessors of the Archaeology Unit Standards should be Registered as professional Archaeologists with ASAPA, the Association of Southern African Professional Archaeologists.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

N/A

NOTES

Addendum 1: The four competency levels in the USA qualification:

Advanced Level Competencies

To be developed

Full Level Competencies

Preservation law, philosophy, and practice Research and inventory Preservation planning and compliance Preservation, Treatment and Maintenance Preservation, program and Project Management Professional Discipline

Intermediate Level Competencies

Preservation law, philosophy, and practice Research and inventory Preservation planning and compliance Preservation, Treatment and Maintenance Preservation, program and Project Management Professional Discipline

Entry Level Competencies

Preservation law, philosophy, and practice Research and inventory Preservation planning and compliance Preservation, Treatment and Maintenance Preservation, program and Project Management Professional Discipline

UNIT STANDARDS

(Note: A blank space after this line means that the qualification is not based on Unit Standards.)

UNIT STANDARD ID AND TITLE		LEVEL	CREDITS	STATUS
Core	114936 Participate effectively in a team or group	Level 2	2	Registered

Core	119861 Contribute to the health, safety and security of a fieldwork environment/workplace	Level 2	2	Draft - Prep for P Comment
Core	119862 Use and maintain basic excavation tools and equipment	Level 2	2	Draft - Prep for P Comment
Core	119872 Identify evidence of past human activity	Level 2	10	Draft - Prep for P Comment
Core	119878 Demonstrate techniques to prepare a site for excavation and to rehabilitate an archaeological site	Level 2	4	Draft - Prep for P Comment
Core	114941 Apply knowledge of HIV/AIDS to a specific business sector and a workplace.	Level 3	4	Registered
Core	114943 Describe how to manage workplace relationships	Level 3	2	Registered
Core	114952 Apply problem-solving techniques to make a decision or solve a problem in a real life context	Level 3	2	Registered
Core	117171 Manage time effectively to enhance productivity and enable a balanced lifestyle	Level 3	2	Registered
Core	119863 Apply knowledge of how archaeological deposits accumulate	Level 3	10	Draft - Prep for P Comment
Core	119868 Render basic assistance to an ill or injured person in an outdoor or field situation	Level 3	4	Draft - Prep for P Comment
Core	119871 Investigate key aspects of the human past in Southern Africa	Level 3	5	Draft - Prep for P Comment
Core	119876 Explain basic legal and ethical principles that apply to archaeology	Level 3	2	Draft - Prep for P Comment
Core	119893 Interpret spatial information from maps and other sources	Level 3	2	Draft - Prep for P Comment
Core	119894 Demonstrate techniques for gathering and presenting fieldwork data	Level 3	3	Draft - Prep for P Comment
Core	119896 Investigate potential hazards in local contexts and suggest possible ways to minimise their spatial and social impact	Level 3	3	Draft - Prep for P Comment
Elective	14340 Maintain an existing information system in a business environment	Level 2	4	Registered
Elective	114940 Identify risks associated with substance abuse and dependency in own life	Level 2	2	Registered
Elective	114945 Identify ways of managing relationships in own life	Level 2	2	Registered
Elective	114950 Apply ways of leading in different situations	Level 2	3	Registered
Elective	114981 Capture numerical and text information on an electronic database	Level 2	2	Registered
Elective	119874 Recover hominid and/or faunal remains from a hard matrix	Level 2	5	Draft - Prep for P Comment
Elective	119911 Investigate the costs and benefits of using banking institutions for managing personal finances	Level 2	2	Draft - Prep for P Comment
Elective	119912 Investigate credit in own circumstances	Level 2	3	Draft - Prep for P Comment
Elective	119913 Use a personal budget to manage own money	Level 2	3	Draft - Prep for P Comment
Elective	113907 Explain the impact of personal wellness on work performance	Level 3	2	Registered
Elective	114960 Investigate the need to provide financially for own retirement	Level 3	3	Registered
Elective	114970 Manage risk in own life	Level 3	3	Registered
Elective	114975 Use a web browser in a business environment	Level 3	3	Registered
Elective	114977 Use a spreadsheet package to produce and manage business documents	Level 3	3	Registered
Elective	114978 Use a word processing package to produce business documents	Level 3	3	Registered
Elective	114979 Operate a computer workstation in a business environment	Level 3	2	Registered
Elective	114980 Use a presentation package to produce business documents	Level 3	3	Registered
Elective	114984 Manage electronic mail in a business environment	Level 3	2	Registered
Elective	119681 Research costs associated with marriage, birth, divorce and death in own circumstances	Level 3	4	Recommended
Elective	119866 Classify faunal remains prior to analysis	Level 3	3	Draft - Prep for P Comment
Elective	119879 Demonstrate ability to process and curate archaeological material in a laboratory environment	Level 3	4	Draft - Prep for P Comment
Elective	119915 Manage personal expenditure	Level 3	3	Draft - Prep for P Comment
Elective	119864 Demonstrate knowledge of archaeology applied to Colonial sites	Level 4	6	Draft - Prep for P Comment
Elective	119865 Recover human skeletal remains for analysis	Level 4	6	Draft - Prep for P Comment
Elective	119867 Create a visual record of artefacts and features for archiving or publication	Level 4	8	Draft - Prep for P Comment

Elective	119869 Demonstrate knowledge of Iron Age archaeology	Level 4	10	Draft - Prep for P Comment
Elective	119870 Research a Southern African archaeological site from published and unpublished material	Level 4	6	Draft - Prep for P Comment
Elective	119873 Record a rock art site	Level 4	6	Draft - Prep for P Comment
Elective	119875 Investigate a maritime site	Level 4	5	Draft - Prep for P Comment
Elective	119877 Demonstrate knowledge of Stone Age archaeology	Level 4	10	Draft - Prep for P Comment
Elective	119903 Analyse and synthesise spatial information from maps and other forms of spatial information	Level 4	4	Draft - Prep for P Comment
Fundamental	7456 Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	5	Reregistered
Fundamental	8968 Accommodate audience and context needs in oral communication	Level 3	5	Reregistered
Fundamental	8969 Interpret and use information from texts	Level 3	5	Reregistered
Fundamental	8970 Write texts for a range of communicative contexts	Level 3	5	Reregistered
Fundamental	8973 Use language and communication in occupational learning programmes	Level 3	5	Reregistered
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	Reregistered
Fundamental	9012 Investigate life and work related problems using data and probabilities	Level 3	5	Reregistered
Fundamental	9013 Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	4	Reregistered



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Contribute to the health, safety and security of a fieldwork environment/workplace

SAQA US ID	UNIT STANDARD TITLE		
119861	Contribute to the health, safety and security of a fieldwork environment/workplace		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	2	Level 2	Regular

SPECIFIC OUTCOME 1

Identify potential hazards in a fieldwork environment or workplace.

SPECIFIC OUTCOME 2

Indicate how to limit damage to persons or property in the event of an accident or emergency.

SPECIFIC OUTCOME 3

Indicate how to contribute to the maintenance of security in the fieldwork environment or workplace.

SPECIFIC OUTCOME 4

Explain emergency procedures in a field environment or workplace.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Use and maintain basic excavation tools and equipment

SAQA US ID		UNIT STANDARD TITLE	
119862		Use and maintain basic excavation tools and equipment	
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	Traditions, History and Legacies
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	2	Level 2	Regular

SPECIFIC OUTCOME 1

Identify and use basic excavation tools.

SPECIFIC OUTCOME 2

Clean and maintain basic excavation equipment.

SPECIFIC OUTCOME 3

Explain how equipment is secured on site.

SPECIFIC OUTCOME 4

Prepare excavation tools for transportation and storage.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Apply knowledge of how archaeological deposits accumulate

SAQA US ID	UNIT STANDARD TITLE		
119863	Apply knowledge of how archaeological deposits accumulate		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	10	Level 3	Regular

SPECIFIC OUTCOME 1

Explain the basic principles of stratigraphy.

SPECIFIC OUTCOME 2

Identify and interpret variations in the deposit in 2- and 3- dimensional context.

SPECIFIC OUTCOME 3

Explain why and how findings are recorded on a site.

SPECIFIC OUTCOME 4

Demonstrate how the deposit is processed at an archaeological excavation or site.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge of archaeology applied to Colonial sites

SAQA US ID	UNIT STANDARD TITLE		
119864	Demonstrate knowledge of archaeology applied to Colonial sites		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Outline the history of Colonial expansion.

SPECIFIC OUTCOME 2

Explain changes in structural features, spatial patterns and artefacts on Colonial sites over time.

SPECIFIC OUTCOME 3

Use artefacts to date a Colonial site.

SPECIFIC OUTCOME 4

Explain what archaeologists contribute to knowledge of the Colonial period.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Recover human skeletal remains for analysis

SAQA US ID	UNIT STANDARD TITLE		
119865	Recover human skeletal remains for analysis		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Apply knowledge of death and burial in an archaeological context in South Africa.

SPECIFIC OUTCOME 2

Apply knowledge of burial practices to excavate a grave.

SPECIFIC OUTCOME 3

Demonstrate knowledge of the bones of the human skeleton.

SPECIFIC OUTCOME 4

Research issues regarding the excavation of human remains.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Classify faunal remains prior to analysis

SAQA US ID		UNIT STANDARD TITLE	
119866		Classify faunal remains prior to analysis	
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	Traditions, History and Legacies
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 3	Regular

SPECIFIC OUTCOME 1

Explain how faunal remains contribute to our knowledge of the past.

SPECIFIC OUTCOME 2

Identify the main elements of animal skeletons.

SPECIFIC OUTCOME 3

Classify faunal remains according to animal categories.

SPECIFIC OUTCOME 4

Recognise modified bones.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Create a visual record of artefacts and features for archiving or publication

SAQA US ID	UNIT STANDARD TITLE		
119867	Create a visual record of artefacts and features for archiving or publication		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	8	Level 4	Regular

SPECIFIC OUTCOME 1

Explain the conventions for drawing artefacts and archaeological features.

SPECIFIC OUTCOME 2

Demonstrate different scaling techniques.

SPECIFIC OUTCOME 3

Illustrate artefacts and archaeological features.

SPECIFIC OUTCOME 4

Photograph artefacts.

SPECIFIC OUTCOME 5

Archive site records.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Render basic assistance to an ill or injured person in an outdoor or field situation

SAQA US ID	UNIT STANDARD TITLE		
119868	Render basic assistance to an ill or injured person in an outdoor or field situation		
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	Traditions, History and Legacies
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 3	Regular

SPECIFIC OUTCOME 1

Recognise and deal with medical emergencies and First Aid situations in a field or outdoor environment.

SPECIFIC OUTCOME 2

Identify the cause and treat a bleeding or burn wound with dressings and bandages in the field.

SPECIFIC OUTCOME 3

Recognise the symptoms and treat an injured person for choking, drowning and shock.

SPECIFIC OUTCOME 4

Recognise and immobilise a fracture with dressings, bandages and splints.

SPECIFIC OUTCOME 5

Explain the procedures that apply when someone is injured or falls ill in the field.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge of Iron Age archaeology

SAQA US ID	UNIT STANDARD TITLE		
119869	Demonstrate knowledge of Iron Age archaeology		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	10	Level 4	Regular

SPECIFIC OUTCOME 1

Explain the origins of the Iron Age in Africa.

SPECIFIC OUTCOME 2

Investigate mining and metallurgy in Iron Age Southern Africa.

SPECIFIC OUTCOME 3

Investigate Iron Age farming practices.

SPECIFIC OUTCOME 4

Explain settlement patterns and the rise of complex societies in Southern Africa.

SPECIFIC OUTCOME 5

Infer information about Iron Age traditions and customs from artefacts.

SPECIFIC OUTCOME 6

Identify evidence of trade and exchange.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Research a Southern African archaeological site from published and unpublished material

SAQA US ID		UNIT STANDARD TITLE	
119870		Research a Southern African archaeological site from published and unpublished material	
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	Traditions, History and Legacies
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Access information on archaeological sites in Southern Africa.

SPECIFIC OUTCOME 2

Research the history and significance of an archaeological site.

SPECIFIC OUTCOME 3

Present the findings of own archaeological research.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Investigate key aspects of the human past in Southern Africa

SAQA US ID	UNIT STANDARD TITLE		
119871	Investigate key aspects of the human past in Southern Africa		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	5	Level 3	Regular

SPECIFIC OUTCOME 1

Describe the major archaeological periods in South Africa.

SPECIFIC OUTCOME 2

Identify key species in human evolution and their chronology.

SPECIFIC OUTCOME 3

Investigate an excavated archaeological site.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Identify evidence of past human activity

SAQA US ID		UNIT STANDARD TITLE	
119872		Identify evidence of past human activity	
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	Traditions, History and Legacies
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	10	Level 2	Regular

SPECIFIC OUTCOME 1

Identify archaeological materials.

SPECIFIC OUTCOME 2

Classify archaeological materials.

SPECIFIC OUTCOME 3

Identify an archaeological site.

SPECIFIC OUTCOME 4

Explain the importance of context in archaeology.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Record a rock art site

SAQA US ID	UNIT STANDARD TITLE		
119873	Record a rock art site		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Explain the different styles and functions of rock art in Southern Africa.

SPECIFIC OUTCOME 2

Identify the likely location of rock art in Southern Africa.

SPECIFIC OUTCOME 3

Describe and record a rock art site.

SPECIFIC OUTCOME 4

Explain how rock art images deteriorate.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Recover hominid and/or faunal remains from a hard matrix

SAQA US ID	UNIT STANDARD TITLE		
119874	Recover hominid and/or faunal remains from a hard matrix		
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	Traditions, History and Legacies
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	5	Level 2	Regular

SPECIFIC OUTCOME 1

Identify bone and other elements in a hard matrix.

SPECIFIC OUTCOME 2

Demonstrate different methods or techniques used to remove bones from a hard matrix.

SPECIFIC OUTCOME 3

Apply techniques to remove specimens from a matrix.

SPECIFIC OUTCOME 4

Identify the hazards relating to specific preparation techniques.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Investigate a maritime site

SAQA US ID	UNIT STANDARD TITLE		
119875	Investigate a maritime site		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	5	Level 4	Regular

SPECIFIC OUTCOME 1

Describe different vessel types.

SPECIFIC OUTCOME 2

Map an underwater site.

SPECIFIC OUTCOME 3

Excavate an underwater site.

SPECIFIC OUTCOME 4

Handle and conserve underwater artefacts.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain basic legal and ethical principles that apply to archaeology

SAQA US ID	UNIT STANDARD TITLE		
119876	Explain basic legal and ethical principles that apply to archaeology		
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	Traditions, History and Legacies
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	2	Level 3	Regular

SPECIFIC OUTCOME 1

Explain how archaeology is regulated in South Africa.

SPECIFIC OUTCOME 2

Interpret the code for professional archaeologists.

SPECIFIC OUTCOME 3

Explain the role of archaeological minimum standards of practice.

SPECIFIC OUTCOME 4

Explain the social responsibility relating to human remains and grave goods.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate knowledge of Stone Age archaeology

SAQA US ID	UNIT STANDARD TITLE		
119877	Demonstrate knowledge of Stone Age archaeology		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Archaeology	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	Traditions, History and Legacies	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	10	Level 4	Regular

SPECIFIC OUTCOME 1

Outline the history of Stone Age studies in Southern Africa.

SPECIFIC OUTCOME 2

Classify Stone Age artefacts.

SPECIFIC OUTCOME 3

Explain how lifeways are interpreted from Stone Age sites.

SPECIFIC OUTCOME 4

Place the southern African Stone Age in a world context.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate techniques to prepare a site for excavation and to rehabilitate an archaeological site

SAQA US ID		UNIT STANDARD TITLE	
119878		Demonstrate techniques to prepare a site for excavation and to rehabilitate an archaeological site	
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	Traditions, History and Legacies
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 2	Regular

SPECIFIC OUTCOME 1

Clear a site allocated for excavation.

SPECIFIC OUTCOME 2

Set up a grid on an allocated site.

SPECIFIC OUTCOME 3

Identify designated areas in an excavation.

SPECIFIC OUTCOME 4

Explain why movement is restricted in and around the excavation.

SPECIFIC OUTCOME 5

Demonstrate methods for rehabilitating a site.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate ability to process and curate archaeological material in a laboratory environment

SAQA US ID		UNIT STANDARD TITLE	
119879		Demonstrate ability to process and curate archaeological material in a laboratory environment	
SGB NAME		NSB 07	PROVIDER NAME
SGB Archaeology		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	Traditions, History and Legacies
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 3	Regular

SPECIFIC OUTCOME 1

Sort archaeological material into sub-categories.

SPECIFIC OUTCOME 2

Quantify and record archaeological material in a museum or laboratory situation.

SPECIFIC OUTCOME 3

Apply knowledge and skill to conserve archaeological material.

SPECIFIC OUTCOME 4

Explain and apply the archiving system in a specific institution.

No. 737

22 July 2005

**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

Human and Social Studies

publishes the following unit standard for public comment.

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

Comment on the qualifications and unit standards should reach SAQA at the address *below not later than 22 August 2005*. All correspondence should be marked **Standards Setting – SGB Geography** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. E. Brown

Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012 – 431-5144

e-mail ebrown@saqa.co.za



DUGMORE MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Interpret spatial information from maps and other sources

SAQA US ID	UNIT STANDARD TITLE		
119893	Interpret spatial information from maps and other sources		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Geography	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	General Social Science	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	2	Level 3	Regular

SPECIFIC OUTCOME 1

Explore different ways of representing information on maps.

SPECIFIC OUTCOME 2

Locate information on maps.

SPECIFIC OUTCOME 3

Apply knowledge of scale to interpret maps.

SPECIFIC OUTCOME 4

Use maps and other sources to describe landscape.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate techniques for gathering and presenting fieldwork data

SAQA US ID		UNIT STANDARD TITLE	
119894		Demonstrate techniques for gathering and presenting fieldwork data	
SGB NAME		NSB 07	PROVIDER NAME
SGB Geography		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	General Social Science
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 3	Regular

SPECIFIC OUTCOME 1

Explain own role in fieldwork investigations.

SPECIFIC OUTCOME 2

Demonstrate different ways of gathering information in the field.

SPECIFIC OUTCOME 3

Demonstrate techniques for documenting spatial data in the field.

SPECIFIC OUTCOME 4

Report field data.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Identify factors of site and situation that influence trade in small businesses

SAQA US ID		UNIT STANDARD TITLE	
119895		Identify factors of site and situation that influence trade in small businesses	
SGB NAME		NSB 07	PROVIDER NAME
SGB Geography		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	General Social Science
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	2	Level 2	Regular

SPECIFIC OUTCOME 1

Investigate location factors that affect small businesses.

SPECIFIC OUTCOME 2

Identify the market for small businesses.

SPECIFIC OUTCOME 3

Identify elements in the movement of trade that affect small businesses.

SPECIFIC OUTCOME 4

Identify risks in the physical environment that could influence small businesses.



Established in terms of Act 58 of 1995

SOUTH AFRICAN QUALIFICATIONS AUTHORITY**UNIT STANDARD:**

Investigate potential hazards in local contexts and suggest possible ways to minimise their spatial and social impact

SAQA US ID	UNIT STANDARD TITLE		
119896	Investigate potential hazards in local contexts and suggest possible ways to minimise their spatial and social impact		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Geography	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	General Social Science	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 3	Regular

SPECIFIC OUTCOME 1

Describe potential hazards in local contexts.

SPECIFIC OUTCOME 2

Explain where and when hazards occur.

SPECIFIC OUTCOME 3

Explain the impact of hazards in the local area.

SPECIFIC OUTCOME 4

Suggest ways to minimise the effect of hazards in specific situations.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Identify signs of changing weather and the implications for local environments in South Africa

SAQA US ID	UNIT STANDARD TITLE		
119897	Identify signs of changing weather and the implications for local environments in South Africa		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Geography	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	General Social Science	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 2	Regular

SPECIFIC OUTCOME 1

Identify sources of weather information in local regions.

SPECIFIC OUTCOME 2

Identify weather indicators.

SPECIFIC OUTCOME 3

Observe and describe weather events in a local environment.

SPECIFIC OUTCOME 4

Describe the risk associated with weather events.



Established in terms of Act 58 of 1995

SOUTH AFRICAN QUALIFICATIONS AUTHORITY**UNIT STANDARD:****Identify aspects of the local environment that could add value to economic enterprises**

SAQA US ID		UNIT STANDARD TITLE	
119898		Identify aspects of the local environment that could add value to economic enterprises	
SGB NAME		NSB 07	PROVIDER NAME
SGB Geography		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	General Social Science
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 3	Regular

SPECIFIC OUTCOME 1

Identify aspects of the environment that have geographical, ecological, cultural or historical significance.

SPECIFIC OUTCOME 2

Identify visually interesting aspects of the physical landscape.

SPECIFIC OUTCOME 3

Identify features in the area that are suitable for outdoor activities.

SPECIFIC OUTCOME 4

Identify resources in the physical environment that have commercial potential.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain trade in a global economy

SAQA US ID	UNIT STANDARD TITLE		
119899	Explain trade in a global economy		
SGB NAME		NSB 07	PROVIDER NAME
SGB Geography		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	General Social Science
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 4	Regular

SPECIFIC OUTCOME 1

Apply knowledge of trade theory to explain how and why people trade.

SPECIFIC OUTCOME 2

Explain how trade is regulated.

SPECIFIC OUTCOME 3

Explain the role of transport and communication in trade.

SPECIFIC OUTCOME 4

Apply knowledge of trade to selected regions.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Identify changes over time in selected rural landscapes in South Africa

SAQA US ID		UNIT STANDARD TITLE	
119900		Identify changes over time in selected rural landscapes in South Africa	
SGB NAME		NSB 07	PROVIDER NAME
SGB Geography		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	General Social Science
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 2	Regular

SPECIFIC OUTCOME 1

Identify different types of rural environments.

SPECIFIC OUTCOME 2

Identify the processes in selected rural environments and how these processes have changed over time.

SPECIFIC OUTCOME 3

Identify changes in services and technology in selected rural areas.

SPECIFIC OUTCOME 4

Investigate the relationship between a selected rural area and urban area or settlement.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Interpret contemporary changes in urban settlements

SAQA US ID	UNIT STANDARD TITLE		
119901	Interpret contemporary changes in urban settlements		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Geography	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	General Social Science	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 4	Regular

SPECIFIC OUTCOME 1

Describe political processes that underpin contemporary changes in urban settlements in South Africa.

SPECIFIC OUTCOME 2

Explain how the economy of South Africa impacts on urban settlements.

SPECIFIC OUTCOME 3

Explain how demographic change influences urban environments.

SPECIFIC OUTCOME 4

Compare changes in land use in urban settlements.



Established in terms of Act 58 of 1995

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Apply knowledge of trends in urban development over time and space and the implications for selected situations

SAQA US ID		UNIT STANDARD TITLE	
119902		Apply knowledge of trends in urban development over time and space and the implications for selected situations	
SGB NAME		NSB 07	PROVIDER NAME
SGB Geography		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	General Social Science
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Explain why urban areas or settlements form and grow.

SPECIFIC OUTCOME 2

Investigate the structure of selected urban areas or settlements.

SPECIFIC OUTCOME 3

Explain current trends in the urban environment of selected places.

SPECIFIC OUTCOME 4

Apply knowledge of current trends in selected urban environments.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Analyse and synthesise spatial information from maps and other forms of spatial information

SAQA US ID	UNIT STANDARD TITLE		
119903	Analyse and synthesise spatial information from maps and other forms of spatial information		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Geography	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	General Social Science	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 4	Regular

SPECIFIC OUTCOME 1

Select sources of spatial information for specific investigations or situations.

SPECIFIC OUTCOME 2

Analyse spatial information from selected sources.

SPECIFIC OUTCOME 3

Synthesise information relevant to specific investigations or situations.

SPECIFIC OUTCOME 4

Report the findings of investigations based on spatial sources.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Analyse the impact of weather events on selected regions

SAQA US ID	UNIT STANDARD TITLE		
119904	Analyse the impact of weather events on selected regions		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Geography	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	General Social Science	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Research weather events and their socio economic impact.

SPECIFIC OUTCOME 2

Explain the impact of weather events on the biophysical and built environments.

SPECIFIC OUTCOME 3

Analyse the probability of weather events occurring in selected regions and the potential economic impacts.

SPECIFIC OUTCOME 4

Analyse the impacts of weather on a specific system in a local area.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Analyse environmental impacts in rural areas

SAQA US ID	UNIT STANDARD TITLE		
119905	Analyse environmental impacts in rural areas		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Geography	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	General Social Science	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	3	Level 4	Regular

SPECIFIC OUTCOME 1

Describe how humans impact on the physical environment.

SPECIFIC OUTCOME 2

Explain how humans have impacted on the physical environment in selected places.

SPECIFIC OUTCOME 3

Analyse the changes in selected rural areas.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Describe change over time and space in South African urban settlements

SAQA US ID	UNIT STANDARD TITLE		
119906	Describe change over time and space in South African urban settlements		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Geography	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	General Social Science	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 2	Regular

SPECIFIC OUTCOME 1

Identify different types of urban settlements.

SPECIFIC OUTCOME 2

Identify the processes in selected urban environments and how these have changed over time and space.

SPECIFIC OUTCOME 3

Identify the services available in selected urban areas or settlements.

SPECIFIC OUTCOME 4

Investigate levels of service provision in two different urban areas or settlements.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Analyse the nature and distribution of resources and related spatial patterns in South Africa

SAQA US ID	UNIT STANDARD TITLE		
119907	Analyse the nature and distribution of resources and related spatial patterns in South Africa		
SGB NAME	NSB 07	PROVIDER NAME	
SGB Geography	Human and Social Studies		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Human and Social Studies	General Social Science	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 4	Regular

SPECIFIC OUTCOME 1

Describe the nature of resources.

SPECIFIC OUTCOME 2

Investigate the distribution of natural resources in South Africa.

SPECIFIC OUTCOME 3

Explain the basic principles that apply to the use of resources.

SPECIFIC OUTCOME 4

Explain the changing spatial patterns in South Africa.

SPECIFIC OUTCOME 5

Apply geographic knowledge to interpret expert reports.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Facilitate fieldwork activities

SAQA US ID		UNIT STANDARD TITLE	
119908		Facilitate fieldwork activities	
SGB NAME		NSB 07	PROVIDER NAME
SGB Geography		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	General Social Science
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 5	Regular

SPECIFIC OUTCOME 1

Explain fieldwork as a learning activity.

SPECIFIC OUTCOME 2

Plan fieldwork activities.

SPECIFIC OUTCOME 3

Explain legal and ethical issues associated with fieldwork.

SPECIFIC OUTCOME 4

Manage the risk in selected fieldwork activities.

SPECIFIC OUTCOME 5

Demonstrate knowledge and skills required to facilitate specific fieldwork activities.

SPECIFIC OUTCOME 6

Evaluate fieldwork activities.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Explain the implications of climate change for economic sectors

SAQA US ID		UNIT STANDARD TITLE	
119909		Explain the implications of climate change for economic sectors	
SGB NAME		NSB 07	PROVIDER NAME
SGB Geography		Human and Social Studies	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Human and Social Studies	General Social Science
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Explain the nature of climate change.

SPECIFIC OUTCOME 2

Identify the causes of climate change.

SPECIFIC OUTCOME 3

Describe the effects of climate change and the impact on spatial relations.

SPECIFIC OUTCOME 4

Apply knowledge of climate change to specific sectors or industry.

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

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

Services

publishes the following qualifications and unit standards for public comment.

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

Comment on the qualification and unit standards should reach SAQA at the address ***below and no later than 22 August 2005***. All correspondence should be marked **Standards Setting – SGB Maritime Operations** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. Eddie Brown

Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012 – 431-5144

e-mail: ebrown@saqa.co.za


DUGMORE MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

Further Education and Training Certificate: Shore Based Fishing Administration

SAQA QUAL ID	QUALIFICATION TITLE		
49754	Further Education and Training Certificate: Shore Based Fishing Administration		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
QUAL TYPE	FIELD	SUBFIELD	
National Certificate	Services	Transport, Operations and Logistics	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUALIFICATION CLASS
Undefined	178	Level 4	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose

This qualification allows learners to develop a practical understanding of Shore Based Fishing Administration activities within a broad context. It offers extensive insight into Fishing Administration, and facilitates a degree of specialization into different areas, and provides a basis for further specialization. In this regard, it is intended to create access to HET learning in the workplace.

Individuals who have earned this qualification will demonstrate competence in a wide range of Fishing Administration related aspects, which encompass the understanding and execution of Shore Based Fishing practices.

The qualification will enable individuals to establish themselves as credible participants in their field, and open doors to advance to more senior positions within the Fishing Industry.

The qualification supports the objectives of the NQF in that it creates a route for formal acknowledgement of learner achievement where none existed previously. By gaining the qualification, learners will have greater access to employment opportunities and career progression, thus meeting the business sector's need for a greater skills pool. This in turn will facilitate a higher level of employment of South Africans, which will contribute in a small way to addressing unemployment.

Rationale

The typical learner identified to benefit from this qualification will be an individual who is either currently working or aspires to working in the Fishing sector.

The fishing Qualifications currently available belong to specific sub-sectors within the Fishing Industry, such as Transport, Operations and Logistics.

There are no local qualifications currently providing a broad base of knowledge and competence to an aspirant Shore Based Superintendent in the field of Fishing Administration. A great deal of the current learning within this sector takes place through on-the-job coaching and mentoring, but there is no mechanism for formal recognition of such learning. It is envisaged that further qualifications will be developed for this sector.

The range of professional and technical skills specified, the variety of contexts in which the practitioner will operate, and the level of autonomy and accountability for one's own output required by the qualification justifies it as being on NQF level 4. The qualification provides for specific competence within the fishing industry.

The qualification is intended to provide recognition of the professionalism in the industry, and will qualify the individual to be a practitioner in the true sense, within this field.

This qualification will facilitate national recognition of the skills involved in the Fishing Industry at a junior to middle level. It will add value to the sector by recognising the broad range of expertise required to be successful in this field, and should attract many new, potential employees.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED TO BE IN PLACE

It is assumed that learners are already competent in the following:

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

Recognition of prior learning

This qualification may be achieved in part or whole through the RPL process.

ACCESS TO THE QUALIFICATION

There is open access to any learner who is employed in Shore Based Fishing sector, or who is able to arrange for assessment of Shore based Fishing sector specific Unit Standards and Exit Level Outcomes in a Shore Based Fishing sector work environment.

QUALIFICATION RULES

Level, Credits and Learning components

The Certificate in Shore based Fishing Administration at NQF level 4 consists of 178 credits.

Fundamental Unit Standards- total 56 credits.

The Fundamental Unit Standards identified are considered to be essential to the competent fulfilment of the role of an individual in the field of fishing, and includes 16 Credits in Mathematical Literacy.

20 Credits from the field of language and communication studies are included at NQF level 4 where communications is in the first language. 20 Credits are allocated at NQF level three for communications in a second language.

All the Fundamental Unit Standards are compulsory.

Core Unit Standards

The Core Unit Standards constitute 107 credits and are specifically designed to provide a broad, solid foundation for the learner to gain experience in a range of areas within the Shore Based Fishing environment. From this base they will be in a position to specialize in any of a number of areas. The unit standards relate to the basic principles and dynamics of Shore Based Fishing from hands-on application to more of a managerial role within the industry.

All the Core Unit Standards are compulsory

Elective Unit Standards

Not less than 15 credits should be selected from the list of elective unit standards. These constitute choices that indicate the learner's preferred direction in terms of this qualification, and provide the basis for further specialization.

EXIT LEVEL OUTCOMES

1. Provide weather information relating to fishing and Communicate in variety of ways between shore and sea.
2. Provide provisions, services and crew to meet vessel needs.
3. Conduct arrival, departure, vessel administration activities and discharge product from vessel.

4. Coordinate safety management of vessels alongside quay.
5. Coordinate performance, maintenance and repairs.
6. Manage fishing operations.
7. Demonstrate an understanding of ships and related functions.

ASSOCIATED ASSESSMENT CRITERIA

1.
 - > Radio is operated as per specified legislative, user manual and company defined procedures.
 - > Information received is analysed and interpreted as per the needs for the various vessels to defined legislative and or company procedure.
 - > Recommendations and action plans are communicated to the relevant parties at sea and shore within agreed time frames or set company procedure.
 - > Weather activities are identified and explained as per defined metrological maritime/fishing criteria.
 - > Weather information is accessed to determine the impact on the relevant maritime fishing operations.
 - > Short term and long term forecast is communicated to the vessels within the defined company procedure.
2.
 - > Correct stock quantities are supplied to the vessel as per the defined company standards.
 - > Husbandry operations are managed according to the defined schedule.
 - > Manning needs are identified as per industry, company and legislative requirements.
3.
 - > Vessels are informed of the planned arrival times and of any changes that may occur.
 - > Customs and immigrations clearances are obtained after docking and prior to departure as per legislative requirements.
 - > Statutory certificates required on vessels are explained as per the South African Maritime Safety Authority and Marine and Coastal Management requirements.
 - > Safety standards are explained as set out in the various regulations.
 - > Data sheets are compiled, analysed and recorded and submitted to correct authority as per company and legislative requirements.
 - > Accuracy of permit information is verified as per company requirements.
 - > Sign off of vessel handover is carried out as per company procedure.
 - > Administrative data is analysed and filtered to establish suitable outcomes relating to the fishing trip as per company procedure and legislative requirements.
 - > Insurance procedures and policies are explained as per company procedure and legislative requirements.
 - > Recommendations and proposed changes are made to safety procedures in line with legislative requirements.
 - > Hazards relating to re-fuelling and hotwork and precautionary measures that are to be taken are explained in line with defined company procedure in line with legislative requirements.
 - > Product types and quantities are identified in the fish hold as per defined tally provided by skipper
 - > Number of people and skills required to discharge the product is determined as per volume received.
 - > Product delivery is managed as per the actual product delivery versus the delivery plan.
4.
 - > Execution of changes and adherence to safety measures are monitored as per defined company procedure.
 - > Reports and logbooks are monitored and completed as per legislative requirements.
 - > Local General Safety Certificate requirements and Maritime Occupational Safety legislation are understood and interpreted to meet safety requirements.
 - > Training required for safety drills, fire drills and life raft drills is implemented as analysed to specified company procedures.
 - > Merchant Shipping Act is understood and interpreted to support the basic conditions of employment.
 - > Shortfalls are identified, recorded and reported to skipper prior to departure as per company procedure.
 - > Safety requirements are explained and reports generated to ensure compliance to legislative safe working practices.
5.
 - > Maintenance types are explained as used on vessels as per company procedure.
 - > Distinction between electronic and electrical equipment is explained as per operational requirements.
 - > Equipment that is faulty is recorded and reported and the necessary corrective action is initiated as per defined company procedure.
6.
 - > Fishing methods, operations and techniques are identified and explained as they are applicable to the

sector.

- > Problems are resolved as per company procedure.
- > Preserving methods are explained as per various catch types.
- > Fish processing methods on board vessel is explained as per company procedure and defined customer requirements.
- > Compliance issues regarding weighing of catch, conversion factors are identified and explained as per legislation.
- > Fishing data is collected, analysed and compared with historical data and with other vessels to determine performance as per company procedure.

7.

- > Marine engines and their operations are explained as per vessel sector usage.
- > Principles of vessel stability are explained according to legislative guidelines.
- > Watertight integrity of portholes, hatches and storm doors is explained as per vessel classification type.
- > Dry docking requirements and safety precautions are explained in line with legislative requirements.

Integrated Assessment

Assessors should design assessment tools and conduct assessments against the unit standards specified in the qualification. These should take into account established assessment principles and make use of a range of formative and summative assessment methods.

The unit standards are strongly geared towards the world of work and assessment should ideally take place in those environments, using naturally occurring evidence as far as possible. Where the learner is not currently employed, the assessor should simulate the work environment as realistically as possible.

Assessors should specifically check for the following:

1. Demonstration of competence of the specific outcomes in the context of the relevant Fishing environment.
 - > The meeting of all of the assessment criteria associated with the outcomes.
 - > The demonstration of an integrated understanding of the factors at play in the Fishing Industry. In doing so, it may be possible to assess a number of unit standards, outcomes or assessment criteria together.
 - > The ability to analyse various pieces of legislation related to this qualification in order to come a conclusion and make recommendations appropriate to the findings.
 - > The understanding and correct usage of the maritime terminology and language.
 - > The ability to constructively engage with clients and colleagues in order to build and maintain professional relationships to achieve the required objectives.
 - > Where the various Acts are concerned, it is of greater importance that the learner is able to locate the required information within a reasonable time frame than to know it all verbatim.
 - > The integration of the critical cross-field outcomes

Notes for assessors

Assessors should take note of the following general principles when designing and conducting assessments:

- > Focus the initial assessment activities on gathering evidence in terms of the main outcomes expressed in the titles of the unit standards to ensure assessment is integrated rather than fragmented. Remember that we want to declare the person competent in terms of the qualification purpose. Where assessment at title level is unmanageable, then the assessment should be focussed on each specific outcome, or groups of specific outcomes. Take special note of the need for integrated assessment.
- > Ensure that assessment is gathered across the entire range, wherever it applies. Assessment activities should be as close to the real performance as possible, and where simulations or role-players are used, there should be supporting evidence to prove that the candidate is able to perform in the real situation.
- > All assessments should be conducted in accordance with the following universally accepted principles of assessment.

Principles of assessment:

- > Appropriate methods of assessment: The method of assessment does not present any barriers to achievements, which are not related to the evidence.
- > Manageable methods of assessment: The methods are easily arranged, cost-effective assessments that do not unduly interfere with learning.
- > Assessment integration into work or learning: Collection of evidence is integrated into the work or learning process where this is appropriate and feasible.
- > Fair methods of assessment: The methods used do not unfairly help or hinder the candidates.

- > Valid evidence: The assessment focuses on the requirements laid down in the Standard; i.e. the assessment is fit for the purpose.
- > Direct evidence: The activities in the assessment reflect the conditions of actual performance as closely as possible.
- > Authentic evidence: The assessor is satisfied that the work being assessed is attributable to the person being assessed.
- > Sufficient evidence: The collected evidence establishes that all criteria have been met and that performance to the required standard can be repeated consistently.
- > Systematic process: Planning and recording is sufficiently rigorous to ensure that assessment is fair.
- > Open process: Learners can contribute to the planning and accumulation of evidence. Candidates being assessed understand the assessment process and the criteria that apply
- > Consistent process: The same assessor would make the same judgement again in similar circumstances. The judgement made is similar to the judgement that would be made by other assessors.

INTERNATIONAL COMPARABILITY

A number of international and local qualifications were benchmarked and analysed, the following were benchmarked in consideration in the development of this qualification. These are as follows:

- > The Scottish Unit Standards
- > The United Kingdom Unit Standards
- > New Zealand Unit Standards
- > Current South African Standards

In the benchmarking process no similarities existed between these Unit Standard Titles and those that are reflected in this qualification. It is therefore assumed that there are no similar unit standards that have been compiled for a qualification such as this one.

Learners who obtain the qualification are expected to contribute to the effectiveness, productivity and ethical reputation of those within the Fishing Industry and provide an impetus for improved productivity and safety.

ARTICULATION OPTIONS

Articulation possibilities

The qualification may be articulated in the fields of Transport, Operations and Logistics.

Learners who are successful in completing this qualification will be in a position to pursue qualifications that are more specific to general management within the transport/maritime industry e.g. National Certificate: Management NQF Level 5.

MODERATION OPTIONS

- > Any institution offering learning that may enable the achievement of this Qualification must be accredited as a provider with the relevant ETQA.
- > Assessment will be overseen by the relevant ETQA according to the policies and guidelines for assessment of that ETQA, in terms of agreements reached around assessment and moderation between various ETQAs (including professional bodies).
- > 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

- > Anyone assessing a learner against this Qualification must be: registered as an assessor with the relevant ETQA.
- > Be in possession of a Fishing or Maritime Qualification at least at NQF Level 5 or equivalent.

NOTES

N/A

UNIT STANDARDS**(Note: A blank space after this line means that the qualification is not based on Unit Standards.)**

	UNIT STANDARD ID AND TITLE	LEVEL	CREDITS	STATUS
Core	119837 Conduct clearing of vessels for arrival and departure	Level 4	4	Draft - Prep for P Comment
Core	119838 Provide weather information relating to fishing	Level 4	6	Draft - Prep for P Comment
Core	119839 Conduct communications between shore and sea	Level 4	6	Draft - Prep for P Comment
Core	119842 Coordinate performance, maintenance and repairs	Level 4	15	Draft - Prep for P Comment
Core	119845 Discharge product from vessel	Level 4	8	Draft - Prep for P Comment
Core	119846 Demonstrate an understanding of ships and related functions	Level 4	7	Draft - Prep for P Comment
Core	119847 Demonstrate an understanding of fishing related technology	Level 4	12	Draft - Prep for P Comment
Core	119848 Coordinate safety management of vessels alongside quay	Level 4	9	Draft - Prep for P Comment
Core	119836 Provide provisions, services and crew to meet vessel needs	Level 5	4	Draft - Prep for P Comment
Core	119840 Conduct vessel administration activities	Level 5	18	Draft - Prep for P Comment
Core	119841 Manage fishing operations at shore	Level 5	18	Draft - Prep for P Comment
Elective	10170 Demonstrate understanding of employment relations in an organisation	Level 3	3	Registered
Elective	113909 Coach a team member in order to enhance individual performance in work environment	Level 3	5	Registered
Elective	114943 Describe how to manage workplace relationships	Level 3	2	Registered
Elective	119843 Prepare nets for fishing operations	Level 3	12	Draft - Prep for P Comment
Elective	119844 Conduct maritime rigging operations	Level 3	8	Draft - Prep for P Comment
Elective	10035 Demonstrate an understanding of creative principles of marketing communications	Level 4	4	Reregistered
Elective	10978 Recruit and select candidates to fill defined positions	Level 4	10	Registered
Elective	10983 Participate in the implementation and utilisation of equity related processes	Level 4	5	Registered
Elective	11473 Manage individual and team performance	Level 4	8	Registered
Elective	12609 Contribute to effective working relationships	Level 4	4	Registered
Elective	12999 Contribute to the management of costs and the enhancement of value	Level 5	10	Registered
Elective	14155 Create and maintain positive workplace relationships	Level 5	5	Registered
Elective	15238 Devise and apply strategies to establish and maintain relationships	Level 5	3	Registered
Elective	110482 Prepare a budget for a local economic development project and prepare the relevant financial reports	Level 5	8	Registered
Elective	114226 Interpret and manage conflicts within the workplace	Level 5	8	Registered
Elective	114876 Measure and assess the factors that influence material productivity and establish the relative impact of each factor	Level 5	8	Registered
Elective	114886 Measure and assess the factors that influence labour productivity and establish the relative impact of each factor	Level 5	8	Registered
Fundamental	8968 Accommodate audience and context needs in oral communication	Level 3	5	Reregistered
Fundamental	8969 Interpret and use information from texts	Level 3	5	Reregistered
Fundamental	8970 Write texts for a range of communicative contexts	Level 3	5	Reregistered
Fundamental	8973 Use language and communication in occupational learning programmes	Level 3	5	Reregistered
Fundamental	7468 Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6	Reregistered
Fundamental	8974 Engage in sustained oral communication and evaluate spoken texts	Level 4	5	Reregistered
Fundamental	8975 Read analyse and respond to a variety of texts	Level 4	5	Reregistered
Fundamental	8976 Write for a wide range of contexts	Level 4	5	Reregistered
Fundamental	9015 Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6	Reregistered
Fundamental	9016 Represent analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 4	4	Reregistered

Fundamental	12153 Use the writing process to compose texts required in the business environment	Level 4	5	Registered
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SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Provide provisions, services and crew to meet vessel needs

SAQA US ID	UNIT STANDARD TITLE		
119836	Provide provisions, services and crew to meet vessel needs		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 5	Regular

SPECIFIC OUTCOME 1

Calculate consumption of consumables.

SPECIFIC OUTCOME 2

Conduct vessel husbandry operations.

SPECIFIC OUTCOME 3

Prepare and apply manning requirements.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Conduct clearing of vessels for arrival and departure

SAQA US ID		UNIT STANDARD TITLE	
119837		Conduct clearing of vessels for arrival and departure	
SGB NAME		NSB 11	PROVIDER NAME
SGB Maritime Operations		Services	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Services	Transport, Operations and Logistics
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 4	Regular

SPECIFIC OUTCOME 1

Define procedures relating to arrival and clearing of vessels.

SPECIFIC OUTCOME 2

Conduct entering and clearing operations.

SPECIFIC OUTCOME 3

Understand and apply legislation relating to arrival and clearing.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Provide weather information relating to fishing

SAQA US ID	UNIT STANDARD TITLE		
119838	Provide weather information relating to fishing		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Demonstrate an understanding of and analyze, different weather patterns and the related implications.

SPECIFIC OUTCOME 2

Access and analyse weather information.

SPECIFIC OUTCOME 3

Provide information relevant to weather forecasts.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Conduct communications between shore and sea

SAQA US ID	UNIT STANDARD TITLE		
119839	Conduct communications between shore and sea		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	6	Level 4	Regular

SPECIFIC OUTCOME 1

Apply radio procedures.

SPECIFIC OUTCOME 2

Analyse and interpret incoming information from vessels.

SPECIFIC OUTCOME 3

Act on incoming information to ensure safety of crew on vessels.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Conduct vessel administration activities

SAQA US ID	UNIT STANDARD TITLE		
119840	Conduct vessel administration activities		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	18	Level 5	Regular

SPECIFIC OUTCOME 1

Apply Maritime occupational safety related regulations.

SPECIFIC OUTCOME 2

Conduct product administration relating to quotas and market requirements.

SPECIFIC OUTCOME 3

Conduct permits/licence administration.

SPECIFIC OUTCOME 4

Apply vessel handover administration activities.

SPECIFIC OUTCOME 5

Act on administrative data from vessels after sea trip.

SPECIFIC OUTCOME 6

Apply insurance methodologies.

SPECIFIC OUTCOME 7

Evaluate safety documents and recommend relevant safety improvements.

SPECIFIC OUTCOME 8

Apply refuelling and fire precautions (e.g. Hotwork & Immobilisation Certificates from Port Fire Department).



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Manage fishing operations at shore

SAQA US ID	UNIT STANDARD TITLE		
119841	Manage fishing operations at shore		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	18	Level 5	Regular

SPECIFIC OUTCOME 1

Demonstrate an understanding of fishing operations and catching methods.

SPECIFIC OUTCOME 2

Identify and resolve fishing problems that may have occurred at sea.

SPECIFIC OUTCOME 3

Prepare holds and related resources for catch.

SPECIFIC OUTCOME 4

Demonstrate an understanding of product fish processing to related product standards.

SPECIFIC OUTCOME 5

Apply legislation related to fishing permits.

SPECIFIC OUTCOME 6

Evaluate outcomes of fishing processes conducted at sea.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Coordinate performance, maintenance and repairs

SAQA US ID	UNIT STANDARD TITLE		
119842	Coordinate performance, maintenance and repairs		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	15	Level 4	Regular

SPECIFIC OUTCOME 1

Demonstrate an understanding of different types of maintenance required on board vessels.

SPECIFIC OUTCOME 2

Identify the different onboard electronics and electrical equipment and distribution circuits.

SPECIFIC OUTCOME 3

Assess functionality and performance of equipment onboard vessels.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Prepare nets for fishing operations

SAQA US ID	UNIT STANDARD TITLE		
119843	Prepare nets for fishing operations		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	12	Level 3	Regular

SPECIFIC OUTCOME 1

Plan for net making or repairs.

SPECIFIC OUTCOME 2

Cut nets to plan.

SPECIFIC OUTCOME 3

Assemble, repair and maintain nets according to trawl plans.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Conduct maritime rigging operations

SAQA US ID	UNIT STANDARD TITLE		
119844	Conduct maritime rigging operations		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	8	Level 3	Regular

SPECIFIC OUTCOME 1

Splice wires and/or ropes.

SPECIFIC OUTCOME 2

Operate deck machinery and equipment.

SPECIFIC OUTCOME 3

Rig, blocks and tackles.

SPECIFIC OUTCOME 4

Conduct maintenance operations on board vessels.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Discharge product from vessel

SAQA US ID	UNIT STANDARD TITLE		
119845	Discharge product from vessel		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	8	Level 4	Regular

SPECIFIC OUTCOME 1

Assess product to be discharged and determine destination.

SPECIFIC OUTCOME 2

Establish resourcing requirements.

SPECIFIC OUTCOME 3

Manage discharge and delivery.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of ships and related functions

SAQA US ID	UNIT STANDARD TITLE		
119846	Demonstrate an understanding of ships and related functions		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	7	Level 4	Regular

SPECIFIC OUTCOME 1

Demonstrate an understanding of marine engineering, principles and practices.

SPECIFIC OUTCOME 2

Demonstrate an understanding of naval architecture related to stability.

SPECIFIC OUTCOME 3

Demonstrate an understanding of ship construction, and watertight integrity.

SPECIFIC OUTCOME 4

Explain the basics of dry-docking.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of fishing related technology

SAQA US ID		UNIT STANDARD TITLE	
119847		Demonstrate an understanding of fishing related technology	
SGB NAME		NSB 11	PROVIDER NAME
SGB Maritime Operations		Services	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Services	Transport, Operations and Logistics
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	12	Level 4	Regular

SPECIFIC OUTCOME 1

Identify and define commercial specie types.

SPECIFIC OUTCOME 2

Demonstrate an understanding of fishing grounds as per permit details.

SPECIFIC OUTCOME 3

Define hunting related operations.

SPECIFIC OUTCOME 4

Monitor performance of related fishing technology.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Coordinate safety management of vessels alongside quay

SAQA US ID	UNIT STANDARD TITLE		
119848	Coordinate safety management of vessels alongside quay		
SGB NAME	NSB 11	PROVIDER NAME	
SGB Maritime Operations	Services		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Services	Transport, Operations and Logistics	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	9	Level 4	Regular

SPECIFIC OUTCOME 1

Check and administer safety operations.

SPECIFIC OUTCOME 2

Maintain operational status of LOPPC, OWS.

SPECIFIC OUTCOME 3

Apply fleet safety plan and LGSC requirements, Maritime Occupational Safety.

SPECIFIC OUTCOME 4

Monitor safety-training requirements.

SPECIFIC OUTCOME 5

Demonstrate a basic knowledge of legislation and company policy.

SPECIFIC OUTCOME 6

Arrange and coordinate for vessel safety prior to departure.

SPECIFIC OUTCOME 7

Assess boarding and access facilities.

No. 747

22 July 2005

HEAD OFFICE: PRETORIAPostnet Suite 248
Private Bag X 06
WATERKLOOF
01451067 Arcadia Street
HATFIELD
0028

Tel: +27 (0) 12 431-5000

Helpdesic: 086 0103188

Fax: +27 (0) 12 431 5039

E-mail: saqainfo@saqa.org.za

http:// www.saqa.org.za



ENSURING QUALITY QUALIFICATIONS

15 July 2005

The South African Qualifications Authority in terms of the National Standards Body Regulations (Government Gazette No. 18787) published on 28 March 1998, hereby gives notice of additional names for the following Standards Generating Body:

SGB: for Real Estate in Organising Field 11: Services

Nominee	Workplace	Nominating Body	Experience/Qualification
Mr. G. L. Bornman	Eltec Properties (Pty) Ltd.	Eltec Properties (Pty) Ltd.	<p>Qualification:</p> <ul style="list-style-type: none"> ▪ B. Mil Stellenbosch University ▪ Diploma in Marketing Management – Damelin ▪ Diploma in Business Management – Damelin <p>Experience</p> <ul style="list-style-type: none"> ▪ 1972 – 1980 SA Air Force ▪ 1981 – 1996 Marketing Director for Allied Putziger (Pty) Ltd ▪ 1997 – 1999 General Manager John Thompson Africa (Pty) Ltd. ▪ 2001 – Present : General Manager, Randburg Branch Group Training Manager Eltec Properties (Pty) Ltd.

DUGMORE MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SAQA'S MISSION

"To ensure the development and implementation of a National Qualification Framework which contributes to the full development of each learner and to the social and economic development of the nation at large"



No. 748

22 July 2005

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

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

Physical Planning and Construction

publishes the following qualification for public comment.

This notice contains the titles, fields, sub-fields, NQF levels, credits, and purpose of the qualification and unit standards. The 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, Hatfield Forum West, 1067 Arcadia Street, Hatfield, Pretoria.

Comment on the qualification and unit standards should reach SAQA at the address **below and no later than 22 August 2005**. All correspondence should be marked **Standards Setting – Electrical Engineering and Construction** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. Eddie Brown
Postnet Suite 248
Private Bag X06
Waterkloof
0145
or faxed to 012 – 431-5144
e-mail: ebrown@saqa.co.za


DUGMORE MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

Further Education and Training Certificate: Overhead Track Equipment

SAQA QUAL ID		QUALIFICATION TITLE	
49774		Further Education and Training Certificate: Overhead Track Equipment	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
QUAL TYPE		FIELD	SUBFIELD
National Certificate		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUALIFICATION CLASS
Undefined	144	Level 4	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

The primary purpose of this qualification is to develop the required competencies in a learner for a career in Overhead Track Equipment.

Qualified learners will be able to:

- > Remove, replace/install and adjust section insulator and/or runners on 3kV DC Overhead Track Equipment.
- > Prepare and install a booster return conductor on 25/50 kV AC Overhead Track Equipment under isolated and earthed conditions.
- > Remove, install/replace and adjust a steady arm and/or side strain insulator on Overhead Track Equipment.
- > Sag and tension overhead conductors on Overhead Track Equipment under isolated and earthed conditions.
- > Set stagger and height of the contact wire on Overhead Track Equipment.
- > Understand basic electrical and mechanical engineering principles.
- > Work to clearance from or on exposed "live" high-voltage Overhead Track Equipment with mechanized maintenance vehicles.
- > Work on live 3kV DC Overhead Track Equipment or to clearance from exposed "live" high-voltage electrical equipment 3kV DC, 25 kV and 50kV AC Overhead Track Equipment and all transmission lines and associated equipment.
- > Communicate effectively with relevant role-players (e.g. peers, managers, etc.) by expressing opinions in spoken and written form.
- > Calculate quantities and distances correctly.

This qualification provides the learner access to both vertically and horizontally articulated qualifications in the electrical engineering and construction field. The productivity and employability of the qualifying learner within the electrical engineering and construction field will be enhanced, thereby contributing to the quality and skills required in this field. Learners are able to demonstrate occupational skills, which enable them to engage in life skills activities, creation of small businesses and health and environmental issues, through the Critical Cross-Field Component of the Qualification.

Rationale for the qualification:

Overhead Track Equipment forms a critical part of the infrastructure of a rail transport system and contributes to the safe and efficient running of rail traffic. Due to the density of rail traffic and the emphasis

placed on reliability, availability and safety of overhead track equipment, it is vitally important that the equipment be repaired in a timeous and safe manner. To enable safe and timeous repair on overhead track equipment, maintenance personnel must have a sound knowledge of various overhead track systems and must follow predetermined faultfinding procedures based on overhead track engineering practices and specifications.

The qualification equips the learner with the skills, knowledge and understanding to remove, assemble, replace/install and maintain overhead track equipment safely and correctly under "Live" and isolated and earthed conditions to the required standards and specifications.

Learners credited with this qualification and who apply the acquired knowledge and skills can help address the critical shortage of qualified personnel in the industry. For the new learner, this qualification is needed to enable him/her to be a productive person in a structured workplace and forms part of the learner development.

These skills and knowledge are essential in and to the following domains:

- > Enabling the rendering of electrical continuity to the rail transport service
- > Enabling the rendering of a rail transport service
- > Contributing to economic growth

For learners who have acquired experience in the workplace, this qualification may be obtained in part or in whole through Recognition of Prior Learning, by formally acknowledging workplace skills acquired without the benefit of formal education or training.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED TO BE IN PLACE

This qualification assumes that learners are competent in:

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

Recognition of prior learning:

This qualification may be obtained in part or in whole through Recognition of Prior Learning. The learner should be thoroughly briefed on the mechanism to be used. Support and guidance should be provided to the learner. Care should be taken that the mechanism used provides the learner with an opportunity to demonstrate competence and is not so onerous as to prevent learners from taking up the Recognition of Prior Learning option towards gaining a qualification.

ACCESS TO THE QUALIFICATION

In terms of the job requirements learners need to be physically fit and robust.

Due to the safety requirements in the overhead track environment, learners must:

- > Not be colour blind;
- > Not be claustrophobic;
- > Be able to gauge distance; and
- > Be able to work at heights.

Access to the qualification is open to all learners complying with the above-mentioned criteria. It would be preferable for learners to first complete the National Certificate in Overhead Track Equipment Level 3 before accessing this qualification.

QUALIFICATION RULES

Level, credits and learning components assigned to this qualification:

The Fundamental, Core and Elective Components that make up this qualification, are listed below.

Fundamental:

- > Communication 20 credits at Level 4

- > Communication 20 credits at Level 3
- > 16 credits at Level 4 Mathematical Literacy
- > Total: 56 credits

Core:

- > 73 credits at Level 4
- > Total: 73 credits

Elective:

- > 12 credits at Level 3
- > 25 credits at Level 4
- > Minimum credits required: 15 credits

The total credits for this qualification are 144.

Motivation for the number of credits assigned:

> Fundamental Credits:

- > A minimum of 20 compulsory credits at level 4 in a first language and a further 20 compulsory credits at a minimum of level 3 in a second language are allocated to Communication . A further 16 credits at level 4 are allocated to Mathematical Literacy.
- > All 56 credits allocated to these fundamental competencies are compulsory.

> Core Credits:

- > 73 compulsory credits have been allocated to these Core competencies.

> Elective Credits:

- > 27 credits have been allocated to the Elective component of the qualification. 15 credits must be selected from this category.

In order to obtain the qualification, the learner needs to complete at least a total of 143 credits as stipulated above.

EXIT LEVEL OUTCOMES

1. Plan and prepare the execution of the removal, assembly, replacement/installation and maintenance work on Overhead Track Equipment.

Range:

- > This includes but is not limited to required personnel, transport, tools and lifting equipment.
- > Solve problems regarding the correctness, quantity and quality of materials, parts and components as measured against quantities needed and material specifications.

2. Remove, assemble, replace/install and maintain overhead track equipment according to company-specific instructions and manufacturer's specifications safely.

3. Finalise the removal, assembly, replacement/installation and maintenance work on overhead track equipment according to company-specific instructions.

4. Communicate effectively with all role players in the work environment.

ASSOCIATED ASSESSMENT CRITERIA

- 1.1 The planning of the task is performed correctly by evaluating and interpreting relevant documentation.
- 1.2 The correct resources and materials are procured after evaluating and interpreting relevant documentation. This includes but is not limited to required personnel, transport, tools and lifting equipment.
- 1.3 Problems regarding the correctness, quantity and quality of materials, parts and components as measured against quantities needed and material specifications to perform the tasks such as
 - > Removing assembling, and adjusting section insulator and/or runners on 3kV DC OHTE.
 - > Sag and tension overhead conductors on OHTE under isolated and earthed conditions.
 - > Preparation and installation booster return conductor on 25/50Kv AC OHTE under isolated and earth

conditions.

- > Removal, installation or adjustment to a steady arm and/or side strain insulator on OHTE.
- > Removal, replacement/installation and adjustment of section insulator/ phase break/runners on 25/50Kv AC OHTE under isolated and earthed conditions.
- > Setting stagger and height of the contact wire on OHTE.

can be solved effectively

1.4 Effective communication in the work environment can be demonstrated

1.5 Effective communication with relevant role-players relating to the execution of the removal, assembly, replacement/installation and maintenance work on overhead track equipment can be demonstrated by communicating clearly and concisely in accordance with company-specific communication protocols.

1.6 Working effectively in teams is understood and can be demonstrated by displaying participation when performing the removal, assembly, replacement/installation and maintenance work on overhead track equipment.

2.1 The removal, assembly replacement/installation and maintenance of and quality checks on overhead track equipment are performed safely and correctly as per overhead track equipment specifications, company-specific instructions and manufacturer's specifications.

2.2 Work to clearance from "live" overhead track equipment while performing the removal, replacement/installation and maintenance work on "live" high-voltage overhead track equipment.

2.3 Work to clearance from or on exposed "live" high-voltage OHTE with mechanized maintenance vehicles.

2.4 Problems regarding the suitability and functionality of equipment and tools can be solved effectively by demonstrating the knowledge required for identifying sub-standards and by being able to improvise within acceptable overhead track practices.

2.5 Learners can organise and manage themselves effectively by utilising the resources and executing the task safely and responsibly.

2.6 Effective communication with relevant role-players related to the removal, fitting/installation and maintenance work on overhead track equipment can be demonstrated by communicating clearly and concisely and within the framework of company-specific communication protocols.

2.7 The need for working effectively in teams is understood and can be demonstrated by displaying participative interaction when removing, replacing/installing and maintaining overhead track equipment.

2.8 The use and function of the equipment being installed in relation to the overhead track system can be explained correctly in terms of overhead track practices and philosophies.

3.1 Tools, equipment and material are removed safely and correctly according to company-specific instructions.

3.2 Problems regarding the finalisation of the removal, assembly, replacement/installation and maintenance work can be solved effectively by demonstrating the knowledge required for identifying sub-standards and by being able to improvise within acceptable overhead track practices.

3.3 Learners can organise and manage themselves effectively by utilising the resources and executing the task safely and responsibly.

3.4 Effective communication with relevant role-players related to the cancelling of a work permit when a permit was issued, can be demonstrated by communicating clearly and concisely and within the framework of company-specific communication protocols.

4.1 Information is clearly presented in a timely manner in the required format and to appropriate parties as stipulated in company specific policies and procedures.

4.2 The relevant communication media and protocol is used correctly while performing tasks.

4.3 Verbal communication is clear and concise.

4.4 Documentation related to the task is fully completed in recognisable writing and as per company-specific language policies.

4.5 Learners can organise and manage themselves by understanding and correctly:

- > Following procedures that apply to illness or injury in the work area.
- > Demonstrating the procedures for reporting and recording of potential hazards.
- > Identifying and using protective clothing.
- > Problems with regard to the following can be solved effectively by:
 - > Identifying the potential hazards in the work area.
 - > Limiting injury to persons or damage to property in case of an emergency.
 - > Limiting exposure to, and correctly disposing of hazardous substances.

Integrated assessment:

Because assessment practices must be open, transparent, fair, valid, and reliable and ensure that no learner is disadvantaged in any way whatsoever, an integrated assessment approach is incorporated into the Qualification.

Learning, teaching and assessment are inextricably lined. Whenever possible, the assessment of knowledge, skills, attitudes and values shown in the unit standards should be integrated.

Assessment of the communication, language, literacy and numeracy should be conducted in conjunction with other aspects and should use authentic OHE contexts wherever possible.

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

This qualification was compared with the Transport and Distribution Qualifications (Rail Infrastructure) on the Australian National Training Information Service.

Units of competencies related to Overhead Track Equipment as generated in Australia were obtained from the National Training Information Service (Web Site: www.ntis.gov.au), Certificate (Levels 1 - 4) in Transport and Distribution (Rail Infrastructure).

After scrutinising these, it was evident that the format and structure utilised within the Transport and Distribution Industry Specific Units (TDT02) - Equipment Checking and Maintenance, was different to those prescribed by SAQA. The technical content in the units of competencies were not specific and covered a broad spectrum of equipment and tasks. This resulted in Broad Assessment Criteria.

It was also found that although the Australian Qualifications Framework comprises thirteen national qualifications, the first five qualifications in the vocational education and training sector compare favourably with the FET levels within the NQF.

The SGG/SGA could not find any standards within the discipline of Overhead Track Equipment in other African countries where Overhead Track Equipment is utilised.

Various Railway companies in Africa have approached Transnet to assist in the training of their signalling maintenance officials. Once this is effected, the Unit Standards generated in South Africa will be utilised for such training.

Efforts to obtain British National Vocational Qualifications (NVQs) related railway signalling were unsuccessful. The NVQs are not accessible and could not be used for benchmarking.

During the development of the Unit Standards cognisance was taken of the implementation of a National Railway Safety Regulator. The National Railway Safety Regulator promotes and controls safe rail operations and recognises that this is fundamental to the safety of all persons and the environment. The Unit Standards in railway signalling were aligned to these ideals.

ARTICULATION OPTIONS

This is a qualification in a series in Overhead Track Equipment qualifications varying from NQF Level 2 to 4.

Vertical articulation is possible with:

> National Diploma: Management of Civil Engineering processes

Horizontal articulation is possible:

- > FETC: Railway Signalling, Fault-finding and Repair of Equipment at Level 4
- > National Certificate: Electrical Engineering at NQF Level 4
- > National Certificate: Supervision of Construction processes

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 body, or with an ETQA that has a Memorandum of Understanding 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 body, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
- > Assessment and moderation of assessment will be overseen by the relevant Education, Training, Quality, Assurance (ETQA) Body, or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the ETQA's policies and guidelines for assessment and moderation.
- > Moderation must include both internal and external moderation of assessments at exit points of the Qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual Unit Standards 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

Assessors wishing to assess candidates against this qualification must have:

1. To be registered as an assessor with the relevant ETQA body or that has a Memorandum of Understanding with the relevant ETQA
2. A qualification in Overhead Track Equipment at NQF Level 5 or above
3. Practical work experience in the OHTE environment

NOTES

N/A

UNIT STANDARDS

(Note: A blank space after this line means that the qualification is not based on Unit Standards.)

	UNIT STANDARD ID AND TITLE	LEVEL	CREDITS	STATUS
Core	113873 Understand basic electrical and mechanical engineering principles	Level 4	8	Registered
Core	119881 Prepare a booster return conductor on 25/50 kV AC OHTE under isolated and earthed conditions	Level 4	9	Draft - Prep for P Comment
Core	119883 Remove, replace/install and adjust section insulator/phase break/runners on 25/50kV AC OHTE under isolated and earthed conditions	Level 4	9	Draft - Prep for P Comment
Core	119887 Remove, install/replace and adjust a steady arm and/or side strain insulator on OHTE	Level 4	9	Draft - Prep for P Comment
Core	119888 Work to clearance from or on exposed "live" high-voltage overhead track equipment with mechanised maintenance vehicles	Level 4	7	Draft - Prep for P Comment
Core	119890 Sag and tension overhead conductors on OHTE under isolated and earthed conditions	Level 4	12	Draft - Prep for P Comment
Core	119891 Remove, replace/install and adjust section insulator and/or runners on 3KV DC OHTE	Level 4	10	Draft - Prep for P Comment
Core	119892 Set the stagger and height of the contact wire on OHTE	Level 4	9	Draft - Prep for P Comment
Elective	10740 Lift and move a load using a mechanical lifting equipment	Level 3	7	Registered
Elective	14623 Afford on-track protection	Level 3	5	Registered
Elective	119884 Work on live 3kV DC OHTE, or to clearance from exposed "live" high-voltage electrical equipment (3kV DC, 25 kV and 50kV AC OHTE and all transmission lines and associated equipment)	Level 4	15	Draft - Prep for P Comment
Fundamental	8968 Accommodate audience and context needs in oral communication	Level 3	5	Reregistered
Fundamental	8969 Interpret and use information from texts	Level 3	5	Reregistered
Fundamental	8970 Write texts for a range of communicative contexts	Level 3	5	Reregistered
Fundamental	8973 Use language and communication in occupational learning programmes	Level 3	5	Reregistered

Fundamental	7468 Use mathematics to investigate and monitor the financial aspects of personal, business, national and international issues	Level 4	6	Reregistered
Fundamental	8974 Engage in sustained oral communication and evaluate spoken texts	Level 4	5	Reregistered
Fundamental	8975 Read analyse and respond to a variety of texts	Level 4	5	Reregistered
Fundamental	8976 Write for a wide range of contexts	Level 4	5	Reregistered
Fundamental	9015 Apply knowledge of statistics and probability to critically interrogate and effectively communicate findings on life related problems	Level 4	6	Reregistered
Fundamental	9016 Represent analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 4	4	Reregistered
Fundamental	12153 Use the writing process to compose texts required in the business environment	Level 4	5	Registered



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Prepare a booster return conductor on 25/50 kV AC OHTE under isolated and earthed conditions

SAQA US ID		UNIT STANDARD TITLE	
119881		Prepare a booster return conductor on 25/50 kV AC OHTE under isolated and earthed conditions	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	9	Level 4	Regular

SPECIFIC OUTCOME 1

Communicate clearly and concisely with relevant role players and complete relevant documentation.

SPECIFIC OUTCOME 2

Prepare booster return conductors.

SPECIFIC OUTCOME 3

Prepare return conductors according to company specific instructions and manufacturer's specifications.

SPECIFIC OUTCOME 4

Finalise the installation process of booster return conductors.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Remove, replace/install and adjust section insulator/phase break/runners on 25/50Kv AC OHTE under isolated and earthed conditions

SAQA US ID	UNIT STANDARD TITLE		
119883	Remove, replace/install and adjust section insulator/phase break/runners on 25/50Kv AC OHTE under isolated and earthed conditions		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	9	Level 4	Regular

SPECIFIC OUTCOME 1

Communicate clearly and concisely with relevant role players and complete relevant documentation.

SPECIFIC OUTCOME 2

Prepare to remove, replace/install and adjust section insulator/phase break/runners on 25/50Kv AC on OHTE under isolated and earthed conditions.

SPECIFIC OUTCOME 3

Remove, replace/install and adjust section insulator/phase break/runners on 25/50Kv AC on OHTE under isolated and earthed conditions according to company-specific instructions and manufacturer's specifications.

SPECIFIC OUTCOME 4

Finalise the removal, replacement/installation and adjustment of section insulator/phase break/runners on 25/50Kv AC on OHTE under isolated and earthed conditions.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Work on live 3kV DC OHTE, or to clearance from exposed "live" high-voltage electrical equipment (3kV DC, 25 kV and 50kV AC OHTE and all transmission lines and associated equipment)

SAQA US ID	UNIT STANDARD TITLE		
119884	Work on live 3kV DC OHTE, or to clearance from exposed "live" high-voltage electrical equipment (3kV DC, 25 kV and 50kV AC OHTE and all transmission lines and associated equipment)		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	15	Level 4	Regular

SPECIFIC OUTCOME 1

Work live on 3kV DC OHTE.

SPECIFIC OUTCOME 2

Work to clearance from exposed "live" high-voltage electrical equipment (3kV DC, 25 kV and 50kV AC OHTE and all transmission lines and associated equipment).

SPECIFIC OUTCOME 3

Perform switching, testing, and earthing on high-voltage overhead track equipment and all transmission lines and associated equipment.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Remove, install/replace and adjust a steady arm and/or side strain insulator on OHTE

SAQA US ID	UNIT STANDARD TITLE		
119887	Remove, install/replace and adjust a steady arm and/or side strain insulator on OHTE		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	9	Level 4	Regular

SPECIFIC OUTCOME 1

Communicate clearly and concisely with relevant role players and complete relevant documentation.

SPECIFIC OUTCOME 2

Prepare to remove install/replace and adjust a steady arm and/or side strain isolator.

SPECIFIC OUTCOME 3

Remove, install/replace and adjust steady arm and/or side strain isolator according to company specific instructions and manufacturer's specifications.

SPECIFIC OUTCOME 4

Finalise the removal, installation/replacement and adjustment of steady arm and/or side strain isolator.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Work to clearance from or on exposed "live" high-voltage overhead track equipment with mechanised maintenance vehicles

SAQA US ID	UNIT STANDARD TITLE		
119888	Work to clearance from or on exposed "live" high-voltage overhead track equipment with mechanised maintenance vehicles		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	7	Level 4	Regular

SPECIFIC OUTCOME 1

Prepare the mechanised maintenance vehicle.

SPECIFIC OUTCOME 2

Operate the mechanised maintenance vehicle.

SPECIFIC OUTCOME 3

Communicate clearly and concisely to relevant role players and complete relevant documentation.

SPECIFIC OUTCOME 4

Work safely with due care for self, fellow workers, machines, equipment, materials and environment.

SPECIFIC OUTCOME 5

Shut down and secure the mechanised maintenance vehicle.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Sag and tension overhead conductors on OHTE under isolated and earthed conditions**

SAQA US ID	UNIT STANDARD TITLE		
119890	Sag and tension overhead conductors on OHTE under isolated and earthed conditions		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	12	Level 4	Regular

SPECIFIC OUTCOME 1

Communicate clearly and concisely with relevant role players and complete relevant documentation.

SPECIFIC OUTCOME 2

Prepare to sag and tension overhead conductors on OHTE.

SPECIFIC OUTCOME 3

Sag and tension overhead conductors on OHTE in accordance with company specific procedures and instructions.

SPECIFIC OUTCOME 4

Finalise the sagging and tensioning of overhead conductors on OHTE.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Remove, replace/install and adjust section insulator and/or runners on 3KV DC OHTE

SAQA US ID		UNIT STANDARD TITLE	
119891		Remove, replace/install and adjust section insulator and/or runners on 3KV DC OHTE	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	10	Level 4	Regular

SPECIFIC OUTCOME 1

Communicate clearly and concisely with relevant role players and complete relevant documentation.

SPECIFIC OUTCOME 2

Prepare to assemble, remove and replace section insulator and/or runners.

SPECIFIC OUTCOME 3

Assemble, remove and replace section insulator runners according to company specific instructions and manufacturer's specifications.

SPECIFIC OUTCOME 4

Finalise the assembling, removal, replacement, installation and adjustment of section insulator and/or runners.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Set the stagger and height of the contact wire on OHTE

SAQA US ID	UNIT STANDARD TITLE		
119892	Set the stagger and height of the contact wire on OHTE		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	9	Level 4	Regular

SPECIFIC OUTCOME 1

Communicate clearly and concisely with relevant role players and complete relevant documentation.

SPECIFIC OUTCOME 2

Prepare to set the stagger and height of the contact wire on OHTE.

SPECIFIC OUTCOME 3

Set the stagger and height of the contact wire on OHTE in accordance with company specific procedures and instructions.

SPECIFIC OUTCOME 4

Finalise the setting of the stagger and the height of the contact wire on OHTE.

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

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

Physical Planning and Construction

publishes the following qualification for public comment.

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

Comment on the qualification and unit standards should reach SAQA at the address ***below and no later than 22 August 2005***. All correspondence should be marked **Standards Setting – Electrical Engineering and Construction** and addressed to

The Director: Standards Setting and Development
SAQA

Attention: Mr. Eddie Brown

Postnet Suite 248

Private Bag X06

Waterkloof

0145

or faxed to 012 – 431-5144

e-mail: ebrown@saqa.co.za


DUGMORE MPHUTHING

ACTING DIRECTOR: STANDARDS SETTING AND DEVELOPMENT



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

National Certificate: Overhead Track Equipment

SAQA QUAL ID		QUALIFICATION TITLE	
49773		National Certificate: Overhead Track Equipment	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
QUAL TYPE		FIELD	SUBFIELD
National Certificate		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUALIFICATION CLASS
Undefined	137	Level 2	Regular-Unit Stds Based

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

The primary purpose of this qualification is to develop competencies in a learner as required for a career in the overhead track systems.

A learner credited with this qualification will be able to:

- > safely and effectively maintain overhead track structures and return circuits.
- > progress through learning in the overhead track environment.

Qualified learners will be able to:

- > Understand the basics of how the business functions and its role in the rail sector, i.e. overhead track systems and related activities.
- > Safely and correctly clean and paint overhead track structures.
- > Safely and correctly perform bonding and earthing on 3 kV DC and 25/50 kV AC systems.
- > Communicate effectively with relevant role players (e.g. peers, managers, etc.) by expressing opinions in spoken and written form.
- > Calculate quantities and distances correctly.
- > The Core and Elective Unit Standards provide credits that allow the learner access to both vertically and horizontally articulated qualifications in the electrical engineering and construction field.

Rationale:

This qualification forms the basis for learners who want to follow a career in overhead track equipment and related fields. Overhead track equipment forms a critical part of the infrastructure of a rail transport system and contributes to reliable, available, safe and efficient train operations. It is therefore vitally important that overhead track equipment be safely and correctly maintained on 3 kV DC and 25/50 kV AC in order to meet standards set in associated overhead track equipment engineering specifications.

There are 3 qualifications in OHTE, Level 2, 3 and 4. This is the first qualification in the learning pathway. The qualification equips the learner with the skills, knowledge and understanding to safely and correctly perform cleaning, painting, bonding and earthing on overhead track equipment, such as overhead track structures and to return circuits to the required standards.

Learners credited with this qualification and who apply the acquired knowledge and skills can help address the critical shortage of qualified personnel in the industry. For the new learner, this qualification and its

standards, which are instrumental to the development and recognition of the foundational, practical and reflective competence (applied competence), are needed to be a productive person in a structured workplace and form the basis for further development.

These skills are essential in and to the following domains:

- > Enabling the rendering of electrical continuity to the rail transport service.
- > Enabling the rendering of a rail transport service.
- > Contributing to economic growth.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED TO BE IN PLACE

It is assumed that learners are already competent in the following:

- > Communication at NQF Level 1
- > Mathematical Literacy at NQF Level 1

Recognition of prior learning

This qualification may be obtained in part or in whole through RPL. The learner should be thoroughly briefed on the mechanism to be used and support and guidance should be provided. Care should be taken that the mechanism used provides the learner with an opportunity to demonstrate competence and is not so onerous as to prevent learners from taking up the RPL option towards gaining a qualification.

The following tools may be used to supplement the above minimum assessment methods:

Valid, reliable and authentic evidence (presented as a portfolio of evidence) from past achievements and experience may serve to supplement the assessment of applied competence. The portfolio should include inter alia:

- > Written statements from persons (e.g. current and / or previous employer, colleague, peer, manager, external customers) confirming competence of the learner.
- > Relevant certificates or awards.
- > Previous assessment records.
- > Logbook or register stating evidence of performance.

ACCESS TO THE QUALIFICATION

Access to the qualification is open to any learner bearing in mind the learning assumed to be in place. Learners need to be physically fit and robust.

Due to the safety requirements in the overhead track environment, learners must:

- > Not be colour blind
- > Not be claustrophobic
- > Be able to gauge distance
- > Be able to work at heights

QUALIFICATION RULES

Level, credits and learning components assigned to this qualification

Fundamental

- > Communication at NQF Level 2, 25 Credits
- > Mathematical Literacy at NQF Level 2, 16 Credits
- > Total: 41 credits

Core

- > 16 Credits at Level 1
- > 53 Credits at Level 2
- > 15 Credits at Level 3
- > Total: 84 credits

Elective

- > 5 Credits at Level 1
- > 16 Credits at Level 2
- > 5 Credits at Level 3
- > Total: 12 credits

The total credits for this qualification is 137.

Motivation for the number of credits assigned

- > Fundamental Credits

16 credits are allocated to Mathematical Literacy and 25 for Communication.

- > Core Credits

84 compulsory credits have been allocated to the Core Unit Standards to cover the field sufficiently.

- > Elective Credits

A minimum of 12 credits has to be selected from the 26 listed Elective credits. These credits have been grouped to allow for progression to the next level of learning on the same railway signalling equipment.

EXIT LEVEL OUTCOMES

1. Perform bonding and earthing on 3 KV DC and 25/50KV AC on OHTE.
2. Clean and paint OHTE steel structures under isolated and earthed conditions.
3. Estimate, measure and calculate physical quantities to solve problems in practical situations.
4. Understand, maintain and apply health and safety regulations to a work area.
5. Demonstrate an understanding of the electrical environment in the rail sector.
6. Apply electrical high voltage safety instructions when working in the vicinity of or near exposed "live" high-voltage overhead track equipment.

ASSOCIATED ASSESSMENT CRITERIA

1.

- > Preparations to perform bonding and earthing on 3 kV DC and 25/50 kV AC on OHTE are executed in accordance with company specific instructions and procedures.
- > Bonding and earthing process is performed on 3 kV DC and 25/50 kV AC on OHTE according to company specific instructions and manufacturer's specifications.
- > The process to perform bonding and earthing on 3 KV DC and 25/50KV AC on OHTE are finalised according to company specific instructions and procedures.
- > The correct tools and personal protective equipment are identified, selected and used in accordance with company specific instructions and procedures.
- > Problems related to the bonding and earthing process are identified and solved according to company specific instructions.
- > Effective communication with relevant role-players relating to the execution of the bonding and earthing process on 3 kV DC and 25/50 kV AC on OHTE can be demonstrated by communicating clearly and concisely, in accordance with company-specific communication protocols.
- > Working effectively in teams is understood and can be demonstrated by displaying participation when performing the bonding and earthing process on 3 kV DC and 25/50 kV AC on OHTE.
- > The role of the individual in the work situation and organisation is demonstrated by organising and managing themselves and their activities related to the bonding and earthing process on 3 kV DC and 25/50 kV AC on OHTE by understanding and applying organisational procedures.

2.

- > Preparations to perform the cleaning and painting on OHTE steel structures under isolated and earthed conditions are executed in accordance with company specific instructions and procedures.

- > The cleaning and painting process on OHTe steel structures under isolated and earthed conditions is performed according to company specific instructions and manufacturer's specifications.
 - > The process to perform cleaning and painting on OHTe steel structures under isolated and earthed conditions are finalised according to company specific instructions and procedures.
 - > Information related to the cleaning and painting process on OHTe steel structures under isolated and earthed conditions is collected, analysed, organised and critically evaluated according to company specific instructions and manufacturer's specifications.
 - > The correct tools and personal protective equipment are identified, selected and used in accordance with company specific instructions and procedures.
 - > Working effectively in teams is understood and can be demonstrated by displaying participation when performing the cleaning and painting process on OHTe steel structures under isolated and earthed conditions.
 - > Science and technology is used in the preparation and application when cleaning and painting OHTe steel structures under isolated and earthed conditions according to company specific instructions and manufacturer's specifications.
 - > The role of the individual in the work situation and organisation is demonstrated by organising and managing themselves and their activities related to the cleaning and painting process of OHTe steel structures under isolated and earthed conditions by understanding and applying organisational procedures.
 - > Effective communication with relevant role-players relating to the execution of the cleaning and painting process of OHTe steel structures under isolated and earthed conditions can be demonstrated by communicating clearly and concisely, in accordance with company-specific communication protocols.
- 3.
- > Scales on the measuring instruments are read correctly.
 - > Quantities are estimated to a tolerance acceptable in the context of the estimation.
 - > The appropriate instrument is chosen to measure a particular quantity.
 - > Calculations are carried out correctly.
 - > Appropriate units are used in measurement and calculation.
 - > Problems related to the measurement and calculation of physical quantities are solved.
- 4.
- > Health and safety regulations are understood and can be applied by:
 - > Identifying potential hazards in the work area correctly.
 - > Effectively limiting damage to persons or property in case of an emergency.
 - > Correctly following procedures that apply to emergency, illness or injury in the work area.
 - > Communication with relevant role players is clear and concise and can be demonstrated effectively in the case of:
 - > An incident/accident.
 - > A fire.
 - > An injury or sickness.
 - > Learners can organise and manage themselves by understanding and correctly.
 - > Following procedures that apply to illness or injury in the work area.
 - > Demonstrating the procedures for reporting and recording of potential hazards.
 - > Identifying and using protective clothing.
 - > Problems with regard to the following can be solved effectively by:

- > Identifying the potential hazards in the work area.
- > Limiting damage to persons or property in case of an emergency.
- > Limiting exposure to, and correctly disposing of hazardous substances.

5.

- > Safe work procedures and instructions to work safely in the vicinity of or near low/high-voltage electrical systems are explained and applied according to company specifications.
- > An understanding of the rail and OHTE environment is demonstrated clearly.
- > Information from visual low/high-voltage indicators is evaluated and reacted to critically.
- > The role of the individual in the work situation and organisation is demonstrated by organising and managing themselves and their activities when identifying and reacting to various electrical signs and warning boards and related sub-standard conditions.
- > The interrelatedness of systems within the rail sector is understood by understanding the importance of applying the electrical safety instructions in an electrical environment.

6.

- > Safe work procedures and instructions to work safely in the vicinity of or near live high-voltage overhead track equipment are explained and applied to using work procedures
- > Signs and warning boards related to high-voltage overhead track equipment are identified and reacted to correctly
- > Sub standards conditions related to high-voltage overhead track equipment are identified and reported in accordance with company-specific instructions.
- > The role of the individual in the work situation and organisation is demonstrated by organising and managing themselves and their activities when identifying and reacting to various signs or warning boards and performing maintenance under, near or in the vicinity of live high-voltage overhead track equipment.

Integrated assessment:

Assessors and moderators should develop and conduct their own integrated assessment by using a range of formative and summative assessment methods.

Unit standards in the qualification must be used to assess specific outcomes, critical cross-field outcomes and essential embedded knowledge.

During integrated assessments the assessor should use formative and summative assessment methods and should assess applied competence.

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

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.

A detailed portfolio of evidence is required to prove foundational, practical and reflective competencies (applied competence) of the learner.

INTERNATIONAL COMPARABILITY

This qualification was compared with the Transport and Distribution Qualifications (Rail Infrastructure) on the Australian National Training Information Service.

Units of competencies related to overhead track equipment as generated in Australia were obtained from the National Training Information Service (Web Site: www.ntis.gov.au), Certificate (levels i - iv) in Transport and Distribution (Rail Infrastructure).

After scrutinising these, it was evident that the format and structure utilised within the Transport and Distribution Industry Specific Units (TDT02) - Equipment Checking and Maintenance, was different to those prescribed by SAQA. The technical content in the units of competencies were not specific and covered a

broad spectrum of equipment and tasks. This resulted in broad assessment criteria.

It was also found that although the Australian Qualifications Framework comprises thirteen national qualifications, the first five qualifications in the vocational education and training sector compare favourably with the FET levels within the NQF.

The SGG/SGA could not find any standards within the discipline of OHTE in other African countries where OHTE is utilised.

Various Railway companies in Africa have approached Transnet to assist in the training of their signalling maintenance officials. Once this is effected, the Unit Standards generated in South Africa will be utilised for such training.

Efforts to obtain British National Vocational Qualifications (NVQs) related railway signalling were unsuccessful. The NVQs are not accessible and could not be used for benchmarking.

During the development of the unit standards cognisance was taken of the implementation of a National Railway Safety Regulator. The National Railway Safety Regulator promotes and controls safe rail operations and recognises that this is fundamental to the safety of all persons and the environment. The unit standards in railway signalling were aligned to these ideals.

ARTICULATION OPTIONS

This is a qualification in a series in overhead track equipment qualifications varying from NQF Level 2 to 4.

Vertical articulation is possible with:

- > National Certificate: Railway Signalling, Installation and scheduled maintenance of Equipment at NQF Level 3.
- > National Certificate: Electrical Engineering at NQF Level 3.

Horizontal articulation is possible with:

- > National Certificate: Railway Signalling, Assembly and Wiring of Equipment at 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) Body, or with an ETQA that has a Memorandum of Understanding 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) Body, or with an ETQA that has a Memorandum of Understanding with the relevant ETQA.
- > Assessment and moderation of assessment will be overseen by the relevant (ETQA) Body, or by an ETQA that has a Memorandum of Understanding with the relevant ETQA, according to the ETQA's policies and guidelines for assessment and moderation.
- > Moderation must include both internal and external moderation of assessments at exit points of the Qualification, unless ETQA policies specify otherwise. Moderation should also encompass achievement of the competence described both in individual Unit Standards 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

- > Assessors need to be registered as assessors with the relevant ETQA or with an ETQA that has a Memorandum of Understanding with the relevant ETQA body.
- > Assessors and moderators must be in possession of a relevant qualification in OHTE or Electrical Engineering at least at NQF Level 3.

NOTES

N/A

UNIT STANDARDS*(Note: A blank space after this line means that the qualification is not based on Unit Standards.)*

	UNIT STANDARD ID AND TITLE	LEVEL	CREDITS	STATUS
Core	9839 Apply and maintain safety in an electrical environment	Level 1	5	Reregistered
Core	119882 Demonstrate an understanding of the electrical environment in the rail sector	Level 1	1	Draft - Prep for P Comment
Core	119885 Identify, handle and care for electrical systems material in the rail sector	Level 1	10	Draft - Prep for P Comment
Core	9964 Apply health and safety to a work area	Level 2	3	Reregistered
Core	10252 Identify, inspect, use, maintain and care for engineering hand tools	Level 2	6	Reregistered
Core	10255 Select, use and care for power tools	Level 2	5	Reregistered
Core	12037 Demonstrate knowledge of mechanical and electrical equipment	Level 2	4	Registered
Core	12483 Perform basic first aid	Level 2	4	Reregistered
Core	12484 Perform basic fire fighting	Level 2	4	Reregistered
Core	113868 Handle and care of electrical earthing gear and related equipment	Level 2	2	Registered
Core	113877 Understand fundamentals of electricity	Level 2	8	Registered
Core	115234 Demonstrate knowledge of electrical safe working practices	Level 2	2	Registered
Core	116900 Apply electrical high voltage safety instructions when working in the vicinity of or near exposed "live" high-voltage overhead track equipment	Level 2	1	Registered
Core	119880 Clean and paint OHTE steel structures under isolated and earthed conditions	Level 2	4	Draft - Prep for P Comment
Core	119886 Perform bonding and earthing on 3 KV DC and 25/50KV AC on OHTE	Level 2	15	Draft - Prep for P Comment
Core	119889 Work to clearance from "live" high-voltage overhead track equipment to perform maintenance work	Level 2	9	Draft - Prep for P Comment
Elective	8215 Use and care for lifting equipment	Level 1	5	Reregistered
Elective	114616 Carry out basic gas welding, brazing and cutting in an electrical environment	Level 2	8	Registered
Elective	114669 Carry out basic electric arc welding in an electrical environment	Level 2	8	Registered
Elective	14623 Afford on-track protection	Level 3	5	Registered
Fundamental	7469 Use mathematics to investigate and monitor the financial aspects of personal and community life	Level 2	2	Reregistered
Fundamental	7480 Demonstrate understanding of rational and irrational numbers and number systems	Level 2	3	Reregistered
Fundamental	8962 Maintain and adapt oral communication	Level 2	5	Reregistered
Fundamental	8963 Access and use information from texts	Level 2	5	Reregistered
Fundamental	8964 Write for a defined context	Level 2	5	Reregistered
Fundamental	8967 Use language and communication in occupational learning programmes	Level 2	5	Reregistered
Fundamental	9007 Work with a range of patterns and functions and solve problems	Level 2	5	Reregistered
Fundamental	9008 Identify, describe, compare, classify, explore shape and motion in 2-and 3-dimensional shapes in different contexts	Level 2	3	Reregistered
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	Reregistered
Fundamental	13217 Collect and use information	Level 2	5	Registered



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Clean and paint OHTE steel structures under isolated and earthed conditions

SAQA US ID	UNIT STANDARD TITLE		
119880	Clean and paint OHTE steel structures under isolated and earthed conditions		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	4	Level 2	Regular

SPECIFIC OUTCOME 1

Communicate clearly and concisely with relevant role players and complete relevant documentation.

SPECIFIC OUTCOME 2

Prepare to clean and paint OHTE steel structures.

SPECIFIC OUTCOME 3

Clean and paint OHTE steel structures according to company-specific instructions and manufacturer's specifications.

SPECIFIC OUTCOME 4

Finalise the cleaning and painting of OHTE steel structures.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Demonstrate an understanding of the electrical environment in the rail sector

SAQA US ID	UNIT STANDARD TITLE		
119882	Demonstrate an understanding of the electrical environment in the rail sector		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	1	Level 1	Regular

SPECIFIC OUTCOME 1

Demonstrate an understanding of the rail and OHTE environment.

SPECIFIC OUTCOME 2

Work safely in the vicinity of or near low/high-voltage electrical systems.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Identify, handle and care for electrical systems material in the rail sector

SAQA US ID		UNIT STANDARD TITLE	
119885		Identify, handle and care for electrical systems material in the rail sector	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	10	Level 1	Regular

SPECIFIC OUTCOME 1

Identify electrical systems material.

SPECIFIC OUTCOME 2

Handle and care for electrical systems material.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Perform bonding and earthing on 3 KV DC and 25/50KV AC on OHTE

SAQA US ID		UNIT STANDARD TITLE	
119886		Perform bonding and earthing on 3 KV DC and 25/50KV AC on OHTE	
SGB NAME		NSB 12	PROVIDER NAME
SGB Electrical Engineering & Construction		Physical Planning and Construction	
UNIT STANDARD TYPE		FIELD DESCRIPTION	SUBFIELD DESCRIPTION
Regular		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	15	Level 2	Regular

SPECIFIC OUTCOME 1

Communicate clearly and concisely without misunderstanding with relevant role players and complete relevant documentation.

SPECIFIC OUTCOME 2

Prepare to perform bonding and earthing on 3 KV DC and 25/50KV AC on OHTE.

SPECIFIC OUTCOME 3

Perform bonding and earthing on 3 KV DC and 25/50KV AC on OHTE according to company specific instructions and manufacturer's specifications.

SPECIFIC OUTCOME 4

Finalise bonding and earthing process on 3 KV DC and 25/50KV AC on OHTE.



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Work to clearance from "live" high-voltage overhead track equipment to perform maintenance work

SAQA US ID	UNIT STANDARD TITLE		
119889	Work to clearance from "live" high-voltage overhead track equipment to perform maintenance work		
SGB NAME	NSB 12	PROVIDER NAME	
SGB Electrical Engineering & Construction	Physical Planning and Construction		
UNIT STANDARD TYPE	FIELD DESCRIPTION	SUBFIELD DESCRIPTION	
Regular	Physical Planning and Construction	Electrical Infrastructure Construction	
ABET BAND	CREDITS	NQF LEVEL	UNIT STANDARD TYPE
Undefined	9	Level 2	Regular

SPECIFIC OUTCOME 1

Work safely to clearance from "live" high-voltage overhead track equipment.

SPECIFIC OUTCOME 2

Identify and react upon signs and warning boards related to high-voltage overhead track equipment.

SPECIFIC OUTCOME 3

Apply and remove portable earth connections on high-voltage electrical systems under supervision.

SPECIFIC OUTCOME 4

Perform switching on high-voltage electrical systems under supervision.



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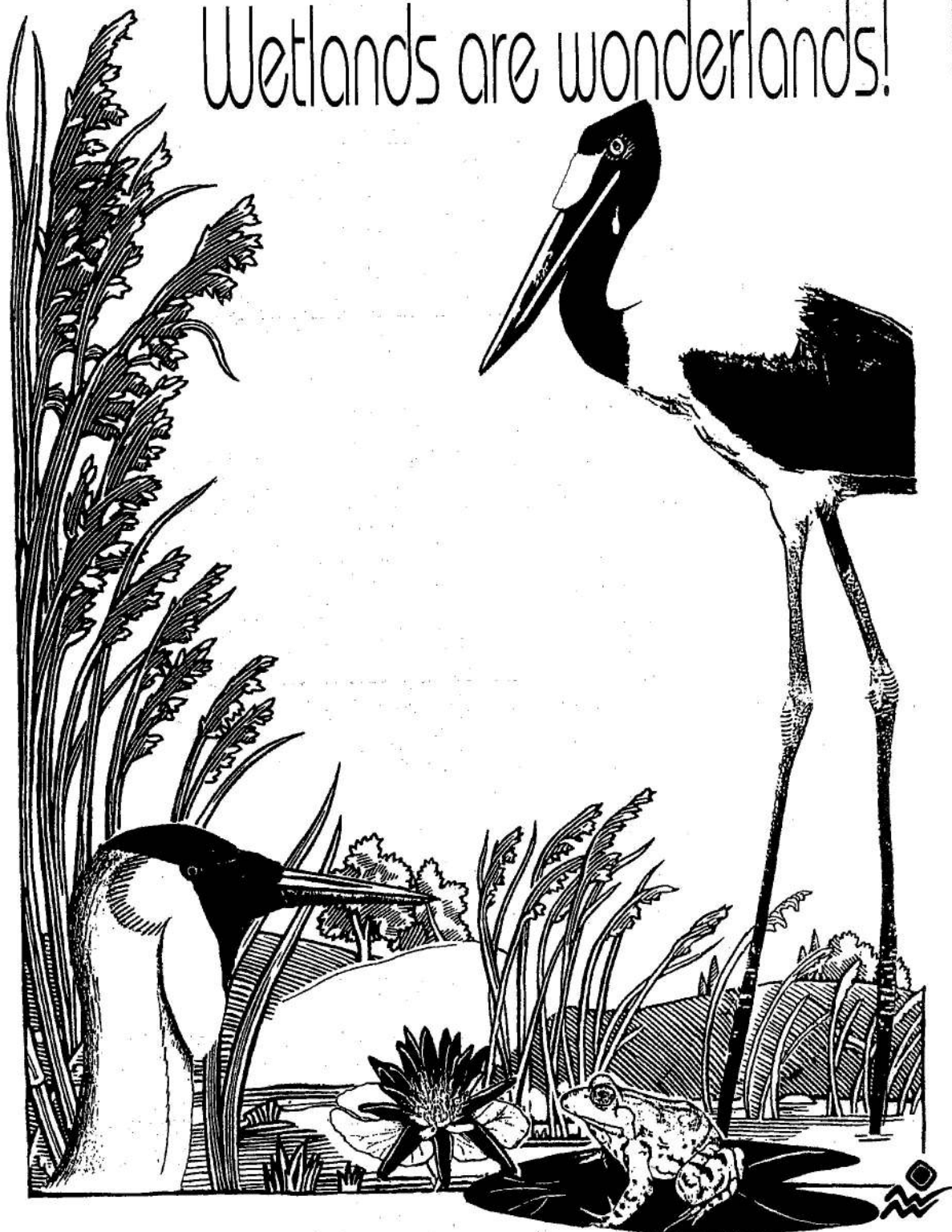
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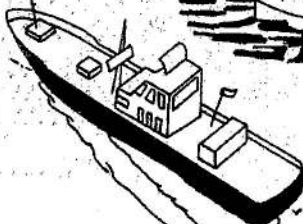
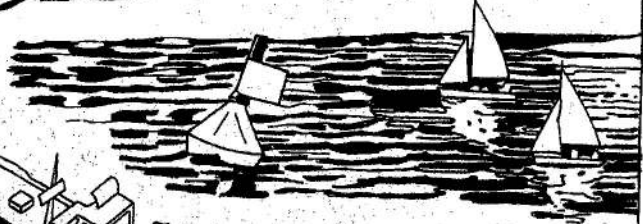
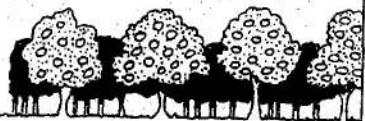
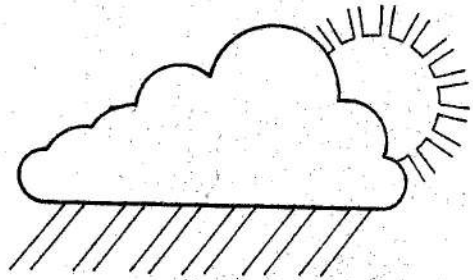
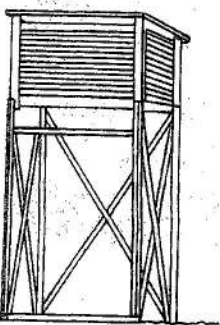
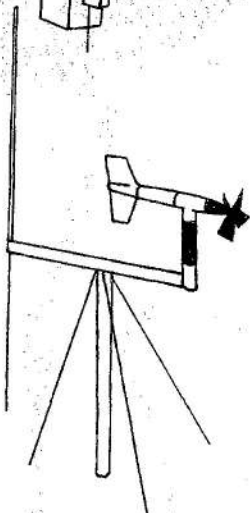
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