

No. 468

30 April 2008

**SOUTH AFRICAN QUALIFICATIONS AUTHORITY (SAQA)**

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

Transport and Logistics Operations

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

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

Comment on the Qualification and Unit Standards should reach SAQA at the address below and **no later 30 May 2008**. All correspondence should be marked **Standards Setting – SGB for Transport and Logistics Operations** and addressed to

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SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:**National Certificate: Train Driving (Defined Working Environments)**

SAQA QUAL ID	QUALIFICATION TITLE		
61849	National Certificate: Train Driving (Defined Working Environments)		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
QUALIFICATION TYPE	FIELD	SUBFIELD	
National Certificate	11 - Services	Transport, Operations and Logistics	
ABET BAND	MINIMUM CREDITS	NQF LEVEL	QUAL CLASS
Undefined	120	Level 3	Regular-Unit Stds Based

This qualification does not replace any other qualification and is not replaced by another qualification.

PURPOSE AND RATIONALE OF THE QUALIFICATION

Purpose:

The purpose of this qualification is to ensure service excellence with a focus on safe working in the field of rail transport services. The qualification is an entry level qualification in a series of qualifications that will form the learning pathway for persons in the rail transport industry (train driving). This qualification provides for the recognition of foundational knowledge, skills and values required and will facilitate access to, and mobility and progression within the industry.

A learner certified as competent in terms of this qualification will be able to move rail vehicles from one point to another safely, on rail, under specific conditions and within defined working environments, in accordance with company-specific policies, procedures and instructions.

A learner obtaining this qualification will be able to:

- > Communicate in a variety of ways.
- > Use mathematics in real life and education, training and development situations.
- > Operate locomotives safely within a defined working area.
- > Carry out shunting duties.
- > Assist with locomotive and equipment tests, and prepare and start locomotives and related equipment.
- > Carry out coordination and/or supervisory duties.

The skills, knowledge, values and understanding in this qualification are essential for national competitiveness and will have a positive impact on social and economic transformation and upliftment of the democratic South African society.

Rationale:

The South African government has set as a priority the shifting of as much traffic as possible - both freight and passenger services - from road to rail. A move such as this necessitates the timely development of the critical competence of train driving that will make the shift possible and sustainable.

Persons operating within this industry, as well as other transport services, will benefit from this national qualification and its competence standards, which are instrumental to the development and recognition of the foundational, practical and reflexive competence (applied competence) needed to render effective and efficient rail transport services. Given the number of drivers entering South Africa from neighbouring countries, this qualification and/or its unit standards is essential to set the benchmark for all drivers operating in the country.

These services are essential in and to the following domains:

- > Enabling the economy.
- > Recognising the support services provided to rail operations by drivers other than mainline operations drivers.
- > Linking private rail users into the national rail network.

Central to the qualification is the development of a culture of safe working.

RECOGNIZE PREVIOUS LEARNING?

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LEARNING ASSUMED IN PLACE

It is assumed that the learner entering this qualification will be competent in:

- > Mathematical Literacy at NQF Level 2.
- > Communication at NQF Level 2.

Recognition of Prior Learning (RPL):

This qualification may be achieved in part or completely through the recognition of prior learning, which includes formal, informal and non-formal learning and work experience. 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. Learners who already work in the train driving industry and who believe that they possess the competencies to enable them to meet all of the outcomes listed in the unit standards will be able to present themselves for assessment against unit standards of their choice.

All RPL assessment is conducted by a registered assessor, and is subject to quality assurance by the ETQA.

Access to the qualification:

Access to this Qualification is open to all learners with at least an NQF Level 2 Qualification or equivalent.

QUALIFICATION RULES

For award of the whole qualification, learners must achieve the required number of credits as specified in the rules of combination below as well as the criteria specified for integrated assessment in the Integrated Assessment Criteria below.

Should learners exit the qualification without completing the whole qualification, recognition will be given for each Unit Standard achieved.

Rules of combination:

- > All unit standards in the Fundamental Component (36 credits) are compulsory.

- > All unit standards in the Core Component (62 credits) are compulsory.
- > Learners must choose unit standards totalling at least 22 credits from the Elective Component.

Note: Candidates must select one of the unit standards to do with operating a locomotive; this will be a prerequisite for performing actual driving duties in the defined working environment. Due to the various topographies and/or layouts that comprise these working environments, Drivers will select relevant Road Knowledge Principles from the Electives available.

Note: Apart from obtaining the generic competencies required for Drivers at this level (fundamental and core unit standards) the learner has specialisation options made possible through appropriate combinations of Electives. Elective choices will determine the scope of qualification and operation for the driver.

Assistant Train Drivers, Shedman, Loco Drivers, Shunt Drivers, and Rail and Road Vehicle (RRV) Operators, operate in defined working environments. Providers of these qualifications need to ensure that learning opportunities towards the competence required is provided in the appropriate context. Practical exposure is required to enable a learner to make intelligent decisions with regard to locomotive handling to ensure safe movement of the locomotives and/or trains on rail.

In a specific operational environment it is normally expected from these Drivers to operate different locomotives in one shift, which requires appropriate qualifications.

EXIT LEVEL OUTCOMES

1. Communicate in a variety of ways.
2. Use mathematics in real life and education, training and development situations.
3. Operate locomotives safely within a defined working area.
4. Carry out shunting duties.
5. Assist with locomotive and equipment tests, and prepare and start locomotives and related equipment.

Critical Cross-field Outcome:

This qualification addresses the following critical cross-field outcomes, as detailed in the associated unit standards:

- > Identifying and solving problems in which responses indicate that responsible decisions using critical and creative thinking have been made.
- > Working effectively with others as a member of a team, group, organisation or community.
- > Organising and managing oneself and one's activities responsibly and effectively.
- > Collecting, analysing, organising and critically evaluating information.
- > Communicating effectively using visual, mathematical and/or language skills in the modes of oral/written persuasion.
- > Using science and technology effectively and critically, showing responsibility towards the environment and health of others.
- > Demonstrating and understanding of the world as a set of related systems by recognising that problem-solving contexts do not exist in isolation.

Learning programmes directed towards this qualification will also contribute to the full personal development of each learner and the social and economic development of the society at large, by making individuals aware of the importance of:

- > Reflecting on and exploring a variety of strategies to learn more effectively.
- > Participating as responsible citizens in the life of local, national and global communities.
- > Being culturally and aesthetically sensitive across a range of social contexts.
- > Exploring education and career opportunities; and developing entrepreneurial opportunities.

ASSOCIATED ASSESSMENT CRITERIA

1. Communicate with clients in two South African languages:

- > Speaking and listening interactions are undertaken with different stakeholders in the rail environment.
- > Sustained speaking and listening interactions take place in at least two South African languages in line with client service standards.
- > Reading, interpretation of, and responses to texts meet requirements for appropriate engagement with written texts in a rail environment.
- > Language and communication are used in ways that enable the learner to access, organise and present information in an occupational learning context.
- > Correspondence and reports are compiled in line with organisational requirements.

2. Use mathematical literacy, concepts and formulae to solve problems and perform calculations:

- > Different number bases and measurement units are used in a way that reflects an understanding of their purpose.
- > Data and probabilities are used to pose questions, collect and organise data, represent and interpret data, and explore and apply probability concepts in simple life and work related situations.
- > Physical quantities, including geometrical relationships, are measured, or estimated, and/or calculated in practical situations relevant to the adult in life or the workplace.
- > Mathematics is used to manage income and expenditure, calculate simple and compound interest, and debate aspects of remuneration in the workplace.

3. Operate locomotives safely within a defined working area:

- > Range: A defined work area is any area in which the operator is required to operate and which is governed by specific sets of legislation, regulations and/or procedures. Areas include but are not limited to yards, sidings, sheds, rail.
- > The range of locomotives in service, are operated in accordance with manufacturer's specifications and company specific procedures.
- > Trains are prepared and despatched in accordance with company specific requirements and the Principles of Safe Movement on Rail (POSMOR).

4. Carry out shunt duties:

- > Shunting duties comply with specific safety requirements, and use signals and fixed and temporary trackside indicators for safe rail movement in accordance with specifications.
- > Planning, organisation and execution of train compilation ensures that trains consisting of different commodities are compiled within the prescribed time span.

5. Assist with locomotive and equipment tests:

- > Different brake systems are identified and described in terms of their key features, operation, and advantages and disadvantages.
- > Tests are carried out according to set procedures, and results reported in accordance with site specific requirements.
- > The consequences for individuals and/or the team for not complying with sign-on and sign-off procedures are explained with reference to legal and company-specific liability.

Integrated Assessment:

Assessment should take place within the context of:

- > Given Quality Assurance policies, procedures and processes.
- > A guided and supported learning environment.

Assessment will take place according to the detailed specifications indicated in the unit standards above.

Over and above the achievement of the specified unit standards, evidence of integration will be required as per the following broad criteria, all within the context of an active learning environment.

Assessors should note that the evidence of integration (as above) could well be presented by candidates when being assessed against the unit standards - thus there should not necessarily be separate assessments for each unit standard and then further assessment for integration. Well designed assessments should make it possible to gain evidence against each unit standard while at the same time gain evidence of integration.

Assessment principles:

Assessment should be in accordance with the following general and specific principles:

- > The initial assessment activities should focus 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. Where assessment at title level is unmanageable, then the assessment can focus on each specific outcome, or groups of specific outcomes. Take special note of the need for integrated assessment.
- > Evidence must be gathered across the entire range specified in each unit standard, as applicable. Assessment activities should be as close to the real performance as possible, and where simulations or role-plays 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:
 - > Use appropriate, fair and manageable methods that are integrated into real work-related or learning situations.
 - > Judge evidence on the basis of its validity, currency, authenticity and sufficiency.
 - > Ensure assessment processes are systematic, open and consistent.

INTERNATIONAL COMPARABILITY

Qualifications from the following countries were sourced for a comparison:

- > Canada.
- > Australia.
- > New Zealand.
- > Scotland.
- > United Kingdom.

The countries were selected by the major rail service providers as being of most relevance to the South African context in terms of infrastructure, equipment, rolling stock, and skills requirements and development. In addition, these examples are recognized internationally as quality providers of training in rail and related services.

It is important to note that Spoornet commissioned their own independent study into risk factors that influence safe operation, with a particular emphasis on human factors and their impact on safe working. The research commissioned by Spoornet is known as the 1996 SPAD (Signals Passed at Danger) Report. This research studied the basic causes of SPADs and related incidents, with a focus on the role of the driver. The SPAD Brief was formulated as follows: "To comprehensively investigate and to report with recommendations, on the underlying causes and contributory factors which may lead to the impairment of train driver/crew functioning at critical moments during the shift cycle".

The research concentrated on Canadian, Scottish and British Rail. It involved close working relationships with international experts including:

- > Dr George Kuehn (Rail Simulation and Training Institute, Chicago).
- > Simon Folkard (Medical Research Council, Sheffield University, UK).

Local and international academic and research institutions at the time of the research expressed interest in Spoornet's SPAD investigation. The research provided this standards generating body with valuable insight, which is reflected in the qualification and unit standards for train drivers.

In more detail, the reviewed qualifications include:

1. Burlington North Railway Academic Science School (BNRAS), Canada/Australia Rail. These Rail Road Operators were chosen for their similarity to the railroad setup within RSA.

> BNRAS does not have unit standard based qualifications for comparison purposes. The learning programmes, though, correlate with the contents of learning programmes and syllabi in the South African context.

> Different profiles exist in the rail transport environment within Canada, for example:

- > Locomotive engineer vs Train Driver in the Republic of South Africa (RSA).
- > Train Dispatcher vs Train Control Officer in RSA.
- > There is no Train Assistant in a Canadian context.

> Australia is in the process of generating Unit Standards for the Train Driver environment and expressed interest in exchanging ideas and standards related to the qualification Train Driving (Mainline Operations) to assist in the generating process. The only Australian profile which correlates with RSA is that of the Train Driver. There is no Train Assistant in an Australian context.

2. New Zealand:

New Zealand has registered qualifications for rail which cover similar outcomes. Qualifications include:

> An introductory certificate at Level 2 for people entering a career in rail transport. The aim of this qualification is to provide recognition for the attainment of a basic level of competence across the range of skills that comprise rail transport. These cover the following areas:

- > Health and safety in the workplace.
- > Safe work practices in the workplace.
- > Basic knowledge of railway signals.
- > Knowledge of rail transport.
- > Engineering hand tools; portable hand held engineering power tools.

> A qualification at Level 3 designed to recognise the skills and knowledge required to operate as a Locomotive Engineer in one of three contexts: the haulage of freight trains; the haulage of passenger trains, and the operation of multiple units and/or railcars all on network routes.

The qualification provides a foundation of core skills and knowledge which build on the units contained in the core of the National Certificate in Rail Transport (Level 2) and includes:

- > Workplace health and safety.
- > Emergency response units.
- > Advanced knowledge of railway signals.
- > Three elective strands which provide options for candidates to demonstrate competence using the signalling/track control systems operating in their geographical area; recognition of specialists; and in-depth skills and knowledge relating to either freight or passenger or multiple unit/railcar operation, including:

3. Scotland/UK:

The qualification was also benchmarked against Scotland and the United Kingdom Qualification Authorities.

- > Scotland, Ireland and the United Kingdom make use of the same qualification database with mutual understanding agreements.
- > The training, provided by train operating companies, lasts 9 - 18 months. This includes classroom training on train types, company procedures, safe working practices and emergency procedures. It also offers the opportunity to practice driving trains under expert supervision. Candidates can achieve a Scottish Vocational Qualifications (SVQs) in Rail Transport Operations (Driving). Topics include the following:
 - > Preparation for duty.
 - > Contributing to provision of a safe and secure work environment.
 - > Coupling and uncoupling rail vehicles.
 - > Assisting in the safe operation of trains in service.
 - > Assisting in preparation of rail vehicles/trains to meet operational requirements.
 - > Assisting in the local movement of rail vehicles to meet operational requirements.
 - > Bringing trains into service; operating and controlling trains in service; handover and despatch of trains.
 - > Responding to abnormal working situations.
 - > Responding to emergency situations on railway premises.

4. SpoorNet Research:

- > Over and above the benchmarking to establish the international comparability of the qualification and unit standards, local and international research around risk factors that influence safe operation has been consulted to ensure the qualification adequately emphasises human factors impacting on safe working. The research consulted as part of the local benchmarking effort is the 1996 SPAD (Signals Passed at Danger) Report commissioned by SpoorNet. This research studied the basic causes of SPADs and related incidents, with a focus on the role of the driver. The SPAD Brief was formulated as follows: "To comprehensively investigate and to report with recommendations, on the underlying causes and contributory factors which may lead to the impairment of train driver/crew functioning at critical moments during the shift cycle." In the course of this research a close working relationship and understanding had been established with the following international parties:
 - > Dr George Kuehn (Rail Simulation and Training Institute, Chicago).
 - > Simon Folkard (Medical Research Council, Sheffield University, UK).

Local and international academic and research institutions at the time of the research expressed interest in SpoorNet's SPAD investigation. The research provided this standards generating body with valuable insight, which is reflected in the qualification and unit standards for train drivers.

5. Conclusion:

Most international rail operations do not have separate qualifications for Drivers under defined working conditions, but there are clear indications of provision for this type of Driver in the unit standards within qualifications. There is every indication that the competence envisaged as outcomes for this qualification have their parallel in other countries.

The South African, with its emphasis on transformation, and particularly the provision of routes to qualification, fully justifies this qualification as part of a career and learning pathway for Train Drivers.

ARTICULATION OPTIONS

The qualification lends itself to both horizontal and vertical articulation possibilities, which allow mobility and progression for the learner in the rail sector in particular, and the transport sector in general.

Horizontal articulation possibilities lie with qualifications such as:

- > ID 57831: National Certificate: Freight Handling, NQF Level 3.
- > ID 23893: National Certificate: Rail Operations (Functional Yard Operations), NQF Level 3.
- > ID 49236: National Certificate: Rail Transport Passenger Services, NQF Level 3.

This qualification has vertical articulation possibilities with the following qualifications:

- > ID 49489: Further Education and Training Certificate: Road Transport Management in the Public Sector, NQF Level 4.
- > ID 24498: National Certificate: Rail Operations (Train Control), NQF Level 4.
- > ID 57849: Further Education and Training Certificate: Dangerous Goods: Multi-modal Transportation, NQF Level 4.

MODERATION OPTIONS

- > Providers offering learning towards this qualification or the component unit standards must be accredited by the relevant ETQA.
- > Moderation of assessment will be overseen by the relevant ETQA according to moderation principles and the agreed ETQA procedures.

The moderator has the following functions:

- > Monitoring and evaluating the standard of all summative assessments in terms of the ETQA policy.
- > Reviewing both substantive and process related matters in the case of an appeal against an assessment decision.
- > Maintaining standards by exercising appropriate influence and control over assessors to ensure good standards of practice.
- > Exercising a moderation function in case of a dispute between assessors, or between any assessor and learner.
- > Giving written feedback to Workplace Education and Training Committees the relevant ETQA and when required.
- > Submitting reports to the ETQA in terms of the ETQA policy.

CRITERIA FOR THE REGISTRATION OF ASSESSORS

- > Assessors must be registered in terms of the requirements of SAQA and the relevant ETQA. Assessors are assumed to have competence in rail transport above the level of this qualification.
- > Anyone assessing a learner or moderating the assessment of a learner against this qualification must be registered with relevant ETQA.

- > Assessment and moderation of assessment will be overseen by the ETQA according to the ETQA's policies and guidelines for assessment and moderation; in terms of agreements reached around assessment and moderation between ETQA's (including professional bodies); and in terms of the moderation guideline detailed immediately below.
- > 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 ETQA for this purpose.
- > Anyone assessing a learner against this qualification must be:
 - > Qualified, certified and re-certified in accordance with validation regulations relevant to the specific qualification and registered with the relevant ETQA.
 - > Fluent in the official language in which the learner prefers to be assessed.
 - > Able to record assessment responses, minutes of meetings between learner and assessor and any other information that may be needed for the performance of moderation activities.
 - > Fair and approachable, and have time available for assessment activities.
- > In the event of an outstanding appeal against an assessment decision, (lodged with the ETQA), the assessor will not be allowed to perform further assessments.

NOTES

N/A

UNIT STANDARDS

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Fundamental	119472	Accommodate audience and context needs in oral/signed communication	Level 3	5
Fundamental	9010	Demonstrate an understanding of the use of different number bases and measurement units and an awareness of error in the context of relevant calculations	Level 3	2
Fundamental	9013	Describe, apply, analyse and calculate shape and motion in 2-and 3-dimensional space in different contexts	Level 3	4
Fundamental	119457	Interpret and use information from texts	Level 3	5
Fundamental	9012	Investigate life and work related problems using data and probabilities	Level 3	5
Fundamental	119467	Use language and communication in occupational learning programmes	Level 3	5
Fundamental	7456	Use mathematics to investigate and monitor the financial aspects of personal, business and national issues	Level 3	5
Fundamental	119465	Write/present/sign texts for a range of communicative contexts	Level 3	5
Core	14638	Shunt rail vehicles	Level 2	18
Core	256199	Take responsibility for own duty shift in rail operations	Level 2	4
Core	14623	Afford on-track protection	Level 3	5
Core	256203	Apply Principles of Safe Movement on Rail (POSMOR) within a rail environment	Level 3	6
Core	256198	Demonstrate knowledge of a specific train operating system	Level 3	3
Core	256200	Observe and repeat signals and train authorisations	Level 3	3
Core	256194	Prepare a locomotive for service	Level 3	5
Core	14634	Utilise various fixed and temporary trackside indicators for rail movement	Level 3	3
Core	256204	Demonstrate understanding of brake systems, and assist with brake tests	Level 4	10
Core	14613	Prepare and despatch trains	Level 4	5
Elective	14641	Compile trains (hazardous and non-hazardous material)	Level 2	12
Elective	256202	Compile a duty roster for train personnel	Level 3	3
Elective	256195	Describe the operation of Funkey, Hudson, Hunslet and related diesel locomotive models	Level 3	16
Elective	256201	Describe the operation of road rail vehicles and motor trolleys	Level 3	16
Elective	13156	Devise strategies for the maintenance of a healthy lifestyle	Level 3	4
Elective	256214	Direct locomotive movements within a specified work environment using an information system	Level 3	4

	ID	UNIT STANDARD TITLE	LEVEL	CREDITS
Elective	256197	Operate a steam heating vehicle	Level 3	3
Elective	14637	Utilise Van Schoor method of train control for safe movement on rail	Level 3	5
Elective	14608	Utilise pilot working of train control for safe movement on rail	Level 3	2
Elective	14594	Utilise semaphore signals/indicators for rail movement on double lines	Level 3	4
Elective	14607	Utilise semaphore signals/indicators for rail movement on single lines	Level 3	8
Elective	14622	Utilise telegraph order system for safe movement on rail	Level 3	5
Elective	14668	Utilise the radio train order system of train control for safe movement on rail	Level 3	3
Elective	14671	Utilise track warrant system of train control for safe movement on rail	Level 3	5
Elective	14670	Utilise wooden train staff system of train control for safe movement on rail	Level 3	3
Elective	256196	Describe the operation of a steam locomotive	Level 4	14
Elective	230402	Operate a train equipped with a vacuum brake system	Level 4	12
Elective	230405	Operate electric locomotive class 5E1 including all upgrades	Level 4	24
Elective	230421	Operate safely under/with high voltage equipment	Level 4	4
Elective	230418	Operate, and regulate the safe movement of locomotive/s	Level 4	10
Elective	14611	Utilise colour-light signalling for rail movement	Level 4	18

LEARNING PROGRAMMES RECORDED AGAINST THIS QUALIFICATION

None



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Prepare a locomotive for service***

SAQA US ID	UNIT STANDARD TITLE		
256194	Prepare a locomotive for service		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	5

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Assess operating conditions to identify hazardous and/or unsafe conditions.

SPECIFIC OUTCOME 2

Inspect the locomotive and auxiliary equipment.

SPECIFIC OUTCOME 3

Start up and shut down a locomotive.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Describe the operation of Funkey, Hudson, Hunslet and related diesel locomotive models

SAQA US ID	UNIT STANDARD TITLE		
256195	Describe the operation of Funkey, Hudson, Hunslet and related diesel locomotive models		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	16

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Demonstrate understanding of the purpose and layout of overhead equipment.

SPECIFIC OUTCOME 2

Demonstrate understanding of the purpose, function and layout of the equipment of a specific locomotive.

SPECIFIC OUTCOME 3

Demonstrate understanding of the purpose and layout of the high tension equipment.

SPECIFIC OUTCOME 4

Start up and shut down a specific locomotive.

SPECIFIC OUTCOME 5

Demonstrate understanding of the locomotive's brake system.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Describe the operation of a steam locomotive*

SAQA US ID	UNIT STANDARD TITLE		
256196	Describe the operation of a steam locomotive		
ORIGINATOR	PROVIDER		
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	14

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Demonstrate understanding of the purpose and layout of overhead equipment.

SPECIFIC OUTCOME 2

Demonstrate understanding of the purpose, function and layout of the equipment of a specific steam locomotive.

SPECIFIC OUTCOME 3

Demonstrate understanding of the steam locomotive's brake system.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:**Operate a steam heating vehicle**

SAQA US ID	UNIT STANDARD TITLE		
256197	Operate a steam heating vehicle		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Prepare to start the steam heating vehicle.

SPECIFIC OUTCOME 2

Start and shut down the steam heating vehicle.

SPECIFIC OUTCOME 3

Monitor the operation of the steam heating vehicle.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Demonstrate knowledge of a specific train operating system***

SAQA US ID	UNIT STANDARD TITLE		
256198	Demonstrate knowledge of a specific train operating system		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Demonstrate knowledge of the layout and condition of a specific operating environment.

SPECIFIC OUTCOME 2

Demonstrate knowledge of signals within a specific operating environment.

SPECIFIC OUTCOME 3

Control movement of rail vehicles within a specific operating environment.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Take responsibility for own duty shift in rail operations***

SAQA US ID	UNIT STANDARD TITLE		
256199	Take responsibility for own duty shift in rail operations		
ORIGINATOR	PROVIDER		
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 2	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Demonstrate an understanding of general physical and mental fitness for duty.

SPECIFIC OUTCOME 2

Sign-on and sign-off for duty.

SPECIFIC OUTCOME 3

Receive and/or inspect the train and/or locomotive equipment.

SPECIFIC OUTCOME 4

Collect, inspect and return or book-in train and personal equipment.

SPECIFIC OUTCOME 5

Complete end of shift reports.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Observe and repeat signals and train authorisations***

SAQA US ID	UNIT STANDARD TITLE		
256200	Observe and repeat signals and train authorisations		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Demonstrate knowledge of signals in a rail environment.

SPECIFIC OUTCOME 2

Identify and observe signals in a specific working environment.

SPECIFIC OUTCOME 3

Confirm signals during rail operations.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Describe the operation of road rail vehicles and motor trolleys*

SAQA US ID	UNIT STANDARD TITLE		
256201	Describe the operation of road rail vehicles and motor trolleys		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	16

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Demonstrate understanding of the purpose and layout of overhead equipment.

SPECIFIC OUTCOME 2

Demonstrate understanding of the purpose, function and layout of the equipment of a specific RRV/motor trolley.

SPECIFIC OUTCOME 3

Demonstrate understanding of the purpose and layout of the high tension equipment.

SPECIFIC OUTCOME 4

Start up and shut down a specific RRV/motor trolley.

SPECIFIC OUTCOME 5

Demonstrate understanding of the RRV/motor trolley's brake system.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:*Compile a duty roster for train personnel*

SAQA US ID	UNIT STANDARD TITLE		
256202	Compile a duty roster for train personnel		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	3

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Identify operating requirements.

SPECIFIC OUTCOME 2

Establish work rosters.

SPECIFIC OUTCOME 3

Resolve difficulties with planned rosters.

SPECIFIC OUTCOME 4

Finalise work rosters.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Apply Principles of Safe Movement on Rail (POSMOR) within a rail environment

SAQA US ID	UNIT STANDARD TITLE		
256203	Apply Principles of Safe Movement on Rail (POSMOR) within a rail environment		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	6

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Apply principles applicable to train and shunting movements.

SPECIFIC OUTCOME 2

Demonstrate knowledge of train control systems.

SPECIFIC OUTCOME 3

Apply principles applicable to movement of rolling stock.

SPECIFIC OUTCOME 4

Describe the physical and ethical requirements to operate in a rail environment.

SPECIFIC OUTCOME 5

Describe abnormal rail conditions.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:***Demonstrate understanding of brake systems, and assist with brake tests***

SAQA US ID	UNIT STANDARD TITLE		
256204	Demonstrate understanding of brake systems, and assist with brake tests		
ORIGINATOR	PROVIDER		
SGB Transport and Logistics Operations			
FIELD	SUBFIELD		
11 - Services	Transport, Operations and Logistics		
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 4	10

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Demonstrate understanding of the principles of braking systems.

SPECIFIC OUTCOME 2

Demonstrate understanding of brake system components.

SPECIFIC OUTCOME 3

Demonstrate knowledge of sub-standard conditions on brake systems.

SPECIFIC OUTCOME 4

Ensure the serviceability of the brakes.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Core	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3



SOUTH AFRICAN QUALIFICATIONS AUTHORITY

UNIT STANDARD:

Direct locomotive movements within a specified work environment using an information system

SAQA US ID	UNIT STANDARD TITLE		
256214	Direct locomotive movements within a specified work environment using an information system		
ORIGINATOR		PROVIDER	
SGB Transport and Logistics Operations			
FIELD		SUBFIELD	
11 - Services		Transport, Operations and Logistics	
ABET BAND	UNIT STANDARD TYPE	NQF LEVEL	CREDITS
Undefined	Regular	Level 3	4

This unit standard does not replace any other unit standard and is not replaced by another unit standard.

SPECIFIC OUTCOME 1

Identify system components and software application for work role.

SPECIFIC OUTCOME 2

Input, store and retrieve data.

SPECIFIC OUTCOME 3

Allocate locomotives to trains for every day operations.

SPECIFIC OUTCOME 4

Apply workplace procedures for management and security of data.

QUALIFICATIONS UTILISING THIS UNIT STANDARD

	ID	QUALIFICATION TITLE	LEVEL
Elective	61849	National Certificate: Train Driving (Defined Working Environments)	Level 3