No. 980 ***7* October *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

Civil Engineering and Construction

Registered by Organising Field **12,** Physical Planning and Construction, 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 upon which qualifications are based. The full qualification and unit standards can be accessed via the **SAQA** web-site at **www.saqa.org.za**. Copies may also **be** obtained from the Directorate of Standards Setting and Development at the **SAQA** offices, Hatfield **Forum West, 1067** Arcadia Street, Hatfield.

Comment on the unit standards should reach **SAQA** at the address ***below and no later than 7 November 2005.*** All correspondence should be marked **Standards Setting – SGB Civil Engineering and Construction** and addressed to

The Director: Standards Setting and Development
SAQA
*Attention: Mr. E. **Brown***
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DUGMORE MPHUTHING
ACTJNG DIRECTOR: STANDARDS SETTING AND DEVELOPMENT

SOUTH AFRICAN QUALIFICATIONS AUTHORITY

QUALIFICATION:

National Certificate: Overhead Track Equipment

SAQA QUAL ID	*QUALIFICATION TITLE*		
50020	National Certificate: Overhead Track Equipment		
SGB NAME		*ORGANISING FIELD ID*	*PROVIDER NAME*
SGB Civil Engineering Construction		12	
QUALIFICATION TYPE		*ORGANISING FIELD DESCRIPTION*	*SUBFIELD*
National Certificate		Physical Planning and Construction	Electrical Infrastructure Construction
ABET BAND	*MINIMUM CREDITS*	*NQF LEVEL*	*QUALIFICATION CLASS*
Undefined	*158*	Level *3*	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.

Qualified learners will be able to:

> Remove, assemble, replace/install and maintain overhead track equipment.
> Obtain, issue and cancel a work permit.
> 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. The social status, 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:

This qualification is for learners who want to follow a career in Overhead Track Equipment (OHTE) 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 the Overhead Track Equipment at level 2, 3 and 4. This is the third qualification in the learning pathway. The qualification equips the learner with the skills, knowledge and understanding to safely and correctly remove, assemble, replace/install and maintain Overhead Track Equipment 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.

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.

RECOGNIZE PREVIOUS LEARNING?

Y

LEARNING ASSUMED TO BE IN PLACE

This qualification assumes that learners are competent in:

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

Recognition of prior learning:

For learners who have acquired experience in the workplace, this qualification may be obtained in part or in Whole through RPL by formally acknowledging workplace skills acquired without the benefit of formal education or training. 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 RPL option towards gaining a qualification.

Access to the qualification:

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
> Not suffer from acrophobia.

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 2 before accessing this qualification.

QUALIFICATION RULES

Level, credits and learning components assigned to this qualification:

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

Fundamental:
> **36** credits at NQF Level **3**
> **36** credits

Core:
> 6 credits at NQF Level 2
> **56** credits at NQF Level **3**
> **30** credits at NQF Level 4
> Total: 92 credits

Elective:
> **31** credits at NQF Level **3**
> Total: **31** credits

The total credits for this qualification are **159.**

Motivation for the number of credits assigned:

Fundamental credits:

> Twenty credits are allocated to Communication and **16** credits to Mathematical Literacy. All the Fundamental unit standards are compulsory.

Core credits:

> 92 credits have been allocated to the Core Unit Standards to sufficiently cover the field of removal, assembling, installation and maintenance of overhead track equipment. All the Core unit standards are compulsory.

Elective credits:

> **31** credits have been allocated to the Elective Component of the qualification. 20 credits must be selected from this category.

In order to obtain the qualification, the learner needs to complete at least a total of **147** credits as stipulated above.

EXIT LEVEL OUTCOMES

1. Plan and prepare the removal, assembly, replacement/installation and maintenance work on overhead track equipment under isolated and earthed conditions.

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

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

4. Understand the need for communication and demonstrate verbal and written communication skills.

5. Demonstrate an understanding of the electrical environment in the rail sector.

ASSOCIATED ASSESSMENT CRITERIA

1.

> Relevant documentation is evaluated and interpreted correctly.
> Correct resources and material are procured after evaluating and interpreting relevant documentation.

Range: (This includes but is not limited to required personnel, transport, tools and lifting equipment)

> Problems regarding the correctness, quantity and quality of materials, parts and components as measured against quantities needed and material specifications are solved to perform the tasks of removal, assembly, replacement/installation and maintenance work on overhead track equipment, effectively under isolated and earthed conditions.

2.

> Overhead track equipment is removed, assembled, replaced/installed and maintained under isolated and earthed conditions safely and correctly as per overhead track equipment specifications, company-specific instructions and manufacturer's specifications.

> Clearance is worked "live" on overhead track equipment while performing the removal, replacement/installation and maintenance work on "live" high-voltage overhead track equipment.

> Problems regarding the suitability and functionality of equipment and tools are solved effectively by demonstrating the knowledge required for identifying sub-standards and by being able to improvise within acceptable overhead track practices. Resources are utilised and the task executed safely and responsibly.

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

3.

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

> Problems regarding finalisation of the removal, assembly, replacement/installation and maintenance work are solved under isolated and earthed conditions by demonstrating the knowledge required for identifying sub-standards and by being able to improvise within acceptable overhead track practices.

> Resources are utilised correctly and the task executed safely and responsibly.

> Work permit is obtained and cancelled within the framework of company-specific communication protocol.

4.

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

> Relevant communication media and protocol are used correctly while performing tasks.

> Verbal communication is clear and concise.

> Complete documentation relating to the task in recognisable writing and as per company-specific instructions.

> Procedures for reporting and recording of potential hazards is followed according to organisational procedure.