The status of the Mines & Works Engineer's GCC

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History

The Certificated Engineer was the first type of Engineering practitioner to be recognised in law in South Africa. The Certificated Engineer (CE) designation was instituted to improve occupational health and safety in Mines & Works over a century ago.

1903: Transvaal Colony Ordinance was passed requiring machinery in mines to be under the charge of an Engineer

1906: Ordinance amended to introduce Certificates of Competency issued by government;

History

1911: The Mines and Works Act specified the duties and responsibilities of Engineers in Mines and Works

1930: Introduction of written examinations for the Government Certificate of Competency (GCC).

Throughout this development, the objective was to ensure minimum standards of competency in the interests of occupational health and safety in mining and the application of machinery.

Legislation

1956 Mines & Works Act and Regulations. Act 27

2.13.1 “The Engineer in General charge”

1996 Mine Health and Safety Act 29

Incorporates the provisions of the Minerals Act 1991

1990 Engineering Professions Act 114

The qualification of Certificated Engineer was added as a category of registration with ECSA

Legislation

2000 Engineering Profession Act 46 (EPA)

This act provides for ECSA to identify engineering work and introduce mandatory registration so that only registered persons may perform identified work.

ECSA are then obliged to make recommendations to the Council for the Built Environment following consultation with voluntary associations, institutions, industries and other bodies that would be affected by regulations on such compulsory registrations.

Current appointments

Current appointments are worded:

You are hereby appointed in terms of Regulation 2.13.1 in force under Schedule 4 of the Mine Health and Safety Act No. 29 of 1996 as Resident Engineer

You are hereby appointed in terms of Regulation 2.13.3.1 in force under Schedule 4 of the Mine Health and Safety Act No. 29 of 1996 as Section Engineer

ECSA

In 1968 the Professional Engineers' Act 81 was enacted. It was the first recognition by government that engineering should be a self governing profession.

The act made provision for the formation of the South African Council for Professional Engineers (SACPE).

In 1969 the category of Professional Engineer was established.

In 1991 the SACPE and other engineering boards joined and the Engineering Council of SA was established as the statutory body decreed by the EPA of 2000.

Roles of ECSA

- Regulator of Engineering practice
- Accreditation of Engineering programmes
- Quality controller
- Registrar for all candidates
- Advisor to the Minister of Public Works
- Recognise Voluntary Associations
- Take disciplinary and legal action where appropriate

View of ECSA on GCC

ECSA would like all current GCC holders to register in the category of Professional Certificated Engineer.

Criteria:

1. Possession of a valid GCC
2. Three years post GCC experience of which one must have been in a legally appointed position
3. Two referee reports supporting the application
4. Appropriate application fees and proofs

DMR

The DMR has been the custodian of the GCC for 80 yrs

It has recently expressed the intent that the competence assessment i.e. GCC exams, be transferred to another appropriate body.

They would however like to retain the powers to remove or suspend any GCC should they deem it necessary.

Any full replacement of the GCC from its current format must carry their full approval.

The ECSA proposal

In terms of the Identification of Engineering Work (IoEW), the work performed by GCC Engineers at Mines & Works classifies as Engineering Work.

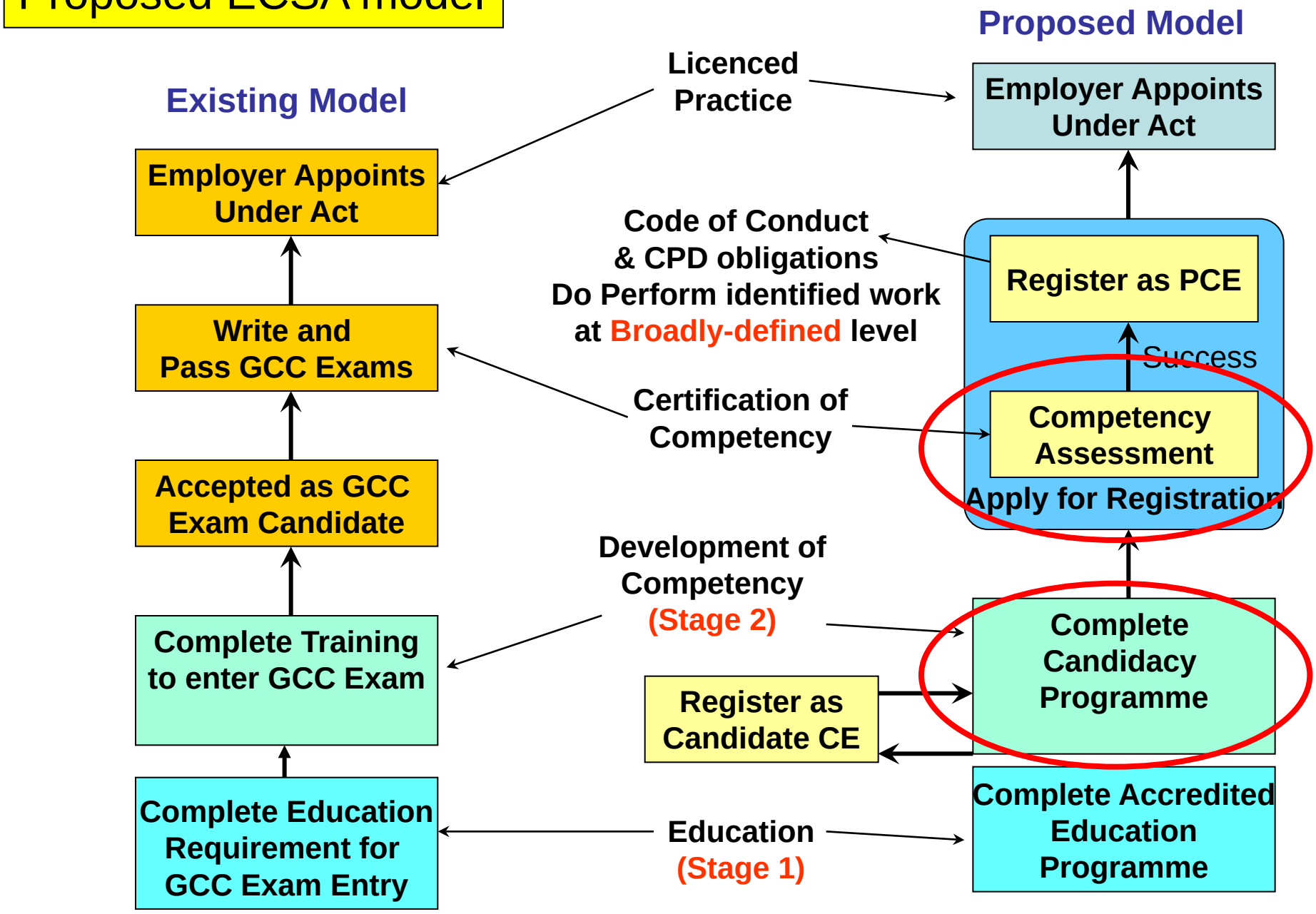
In terms of the Engineering Profession Act 2000, such persons performing Engineering Work must be registered with ECSA.

Therefore practicing Engineers appointed at Mines and Works must be registered with ECSA

ECSA categories of work

Complex	Pr. Engineers
Broadly defined	Pr. Eng. Technologists Pr. Cert. Engineers
Well defined	Pr. Technicians

Proposed ECSA model



ECSA Competency Assessment

In order to satisfy ECSA's criteria, candidates must be judged and found competent in each of the ten outcome areas.

ECSA believes that peers should do the assessments similar to the current referee reports.

The category level for Pr. Cert. Eng = Broadly defined

The ten defined ECSA outcomes are …….

Engineering Professional Competencies

1. Define, investigate and analyse *engineering problems* **at the category level**
2. Design or develop solutions to *engineering problems* **at the category level**
3. Comprehend and apply **category level** knowledge based on engineering sciences, specialist knowledge and knowledge specific to the jurisdiction and local conditions.
4. Manage part or all of one or more engineering activities
5. Recognise and address social, cultural, economic, health and safety and environmental effects and risks of engineering activities performed at **the category level**

Engineering Professional Competencies

6. Meet all legal and regulatory requirements and protect the health and safety of persons and the environment in the course of engineering activities performed at **the category level**
7. Conduct his or her engineering activities ethically
8. Exercise sound judgment in the course of engineering activities performed at **the category level**
9. Be responsible for making decisions on part or all of engineering activities performed at **the category level**
10. Communicate clearly with others in the course of his or her engineering activities

ECSA vs DMR

ECSA does not recognise the current GCC as the sole measure of competence for a Pr. Cert. Eng. as it alone does not test for most of their outcomes as to the candidates ability to apply them.

DMR want GCC Engineers to concentrate more on their technical duties and less of the “softer” issues they appear to be spending their time on.

Unresolved?

Who will do these assessments?

Will there be exams?

If so, who will write, mark and moderate them?

What happens if the stalemate between ECSA and the CBE is not resolved and the IoEW is not approved?

AMRE & SACEA

The two associations represent the interests of all the GCC Engineers in the SA mining industry.

We recognise and take cognisance of the roles and responsibilities of both ECSA and the DMR.

Both associations believe only one body should be accountable for the oversight of any future replacement programme for the current GCC. We believe the current situation is too individualised and needs to become more institutionalised.

AMRE & SACEA

SACEA maintain that written examinations should still be part of the final assessment criteria although it is unknown who would conduct these exams.

Limited GCCs

Both associations are aware that smaller mines and works are unhappy with the need to appoint full GCC qualified Engineers.

Such mines and quarries have made representation to the Chamber of Mines and the DMR for the formation of a limited GCC.

AMRE and SACEA do NOT support the concept of any limited GCC.

Limited GCCs

It <u>may</u> be appropriate for the DMR to grant a lesser qualified person to be in charge of machinery at these mines.

Such new qualification may be at an NQF level 5 but we request that the word “Engineer” not be used in the title. Maintenance Superintendent would appear appropriate.

The Future

The Council for the Built Environment (CBE) has not accepted ECSA's proposed IoEW, i.e. the status quo remains.

Regardless, a sustainable mechanism should be found to replace the GCC that is acceptable to all parties. It needs to become institutionalised.

Summary

If and when the IoEW is approved by the CBE, ECSA has an obligation to enforce compulsory registration for mine Engineers.

After 24 months of promulgation ECSA could refuse to recognise current GCC holders who are NOT registered as Pr. Cert. Engineers and inform employers that they are in breech of the EPA 2000.

Both associations request the members to register with ECSA as Pr. Cert. Eng as soon as possible.

Questions?