



NEWSLETTER – December 2013

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CASA Instrument of Authority

As Registrar I was approached by several engineers requesting a new area of engineering for those engineers who hold Instruments of Authority from the Civil Aviation Safety Authority (CASA).

A key policy issue is the reduction of red tape and this has been achieved by the approval of a regulation on 29 November 2013 that states that an engineer who holds an Instrument of Authority from CASA has the necessary qualifications and competencies to be registered with the Board of Professional Engineers.

The *Professional Engineers Act* provides under section 7A that the areas of engineering are ones for which there is an assessment scheme or ones where the qualifications and competencies are prescribed under section 10(1)(b).

Section 10(1)(b) allows a person to be qualified for registration in an area of engineering if the applicant has the qualifications and competencies prescribed under regulation.

This provision allows there to be areas of engineering in addition to those provided for by an assessment scheme.

CASA authorises engineers through an Instrument of Authority to carry out certain design approval functions. These are:

- Approval of a design of a modification or repair.
- Approval of aircraft components for use as replacements.
- Approval for use of aircraft materials.
- Making finding of compliance with the applicable airworthiness standards and approval of type design data.
- Approval of minor changes in type design.

If you hold a CASA Instrument of Authority you do not need to apply to Engineers Australia for assessment of your qualifications and competencies.

An engineer who holds an Instrument of Authority from CASA will now have the necessary qualifications and competencies to be able to apply directly to the Board of Professional Engineers for registration as a registered professional engineer of Queensland. The application form can be found on http://www.bpeq.qld.gov.au/Registration/Application_Forms

A certified copy of your CASA Instrument of Authority will need to be provided to the Board along with a completed Form 2 Application for Registration.

The area of engineering will be called Aeronautical engineering and will be for all engineers who hold the CASA Instrument of Authority detailed above.

Code of Practice

The Code of Practice has been approved by Governor in Council and will take effect from Friday 29 November 2013. The new Code has been developed as a result of extensive consultation undertaken by the Board of Professional Engineers.

The changes to the new Code are fairly minor and are set out below. For ease of reference the changes to the sections are ***bolded and italicized***. As the changes are self-explanatory an analysis has not been provided but if you have any questions please email the office on admin@bpeq.qld.gov.au

The Code of Practice is an important document that all RPEQ's should be familiar with. Section 129 of the *Professional Engineers Act 2002* provides that when a decision is being made by a Tribunal in a disciplinary proceeding the Tribunal must have regard to the Code of Practice.

The Code can be found on the Boards website – http://www.bpeq.qld.gov.au/Resources/Code_of_Practice

Clause 1 sets out the RPEQ's obligations to Society and the following amendments have been made:

1.2. Honesty, integrity, fairness, and without discrimination:

A registered professional engineer must act with honesty, integrity, fairness, without ***unjustified*** discrimination ***and with due respect for the rights of others and the laws of the communities in which engineering services are supplied.***

1.3. Health, welfare, and community safety:

A registered professional engineer must take reasonable steps to safeguard the health, welfare, and the safety of the ***community including:***

a) Identifying hazards

b) Assessing micro and macro risks

c) Implementing appropriate controls to manage risk

Clause 2 sets out the obligations to Clients and or Employers with the following amendments having been made:

2.1. Truth and objectivity

A registered professional engineer must act truthfully and objectively, and not knowingly mislead ***clients, employers or the public*** in the provision of information, opinions, statements and evidence, nor knowingly misrepresent a situation.

2.3. Providing information (including correspondence and advertising) about registered professional engineers:

A registered professional engineer offering or taking responsibility for a professional engineering service must take reasonable steps to:

- (a) advise clients of their name and Contact Details of the Place; and
- (b) if another registered professional engineer becomes responsible for the professional engineering service advise clients of their name and Contact Details of the Place.

(c) if third party experts are used to provide advice or assistance to inform the engineer of their role the registered professional engineer must advise the client of their names, contact details and credentials to provide advice.

2.5. Disclose actual and potential conflicts of interest:

A registered professional engineer must disclose any actual or possible conflict of interest to a client or employer upon discovery of that actual or possible conflict of interest. Conflicts of interest will include any financial or other interest that is likely to, ***or may reasonably be perceived to***, affect the registered professional engineer's judgment on any professional engineering services carried out for that client or employer.

Clause 3 sets out general professional obligations and the following amendments have been made:

3.1. Bring knowledge, skill, judgment, and care to the task:

A registered professional engineer must bring to the engineering task knowledge, skill, judgment, and care that are of a standard which might reasonably be expected by the public or the registered professional engineer's professional peers.

In considering the appropriate standards, registered professional engineers should have regard to industry and performance standards. One example is the Professional Performance, Innovation and Risk (PPIR) Protocol which documents the essentials of performance for professional engineers acting in a professional capacity.

[Please note that the Board has **not** endorsed the PPIR Protocol but have merely put it in the Code as an example of industry and performance standards which you may wish to consider along with others.]

3.5. Work within area of competence and not misrepresent competence:

A registered professional engineer must:

- (a) undertake professional engineering services only within their area of competence;
- (b) not misrepresent their competence;
- (c) not knowingly permit those whose work they are responsible for to breach paragraph (a) or paragraph (b).

(d) recognise where other professional advice is required and either seek it or recommend to an employer and/or client to seek such expert advice in appropriate areas.

Examples of competence in an area of practice include –

- formal training in that area;
- any previous experience or exposure in the type of work that has been supervised by a registered professional engineer;
- consultation with or reference to a person competent in the area to supervise the task.

- **activities considered to meet competence and ongoing continuing professional development (CPD) requirements of the assessment entities.**

3.6. Supervision:

If a registered professional engineer supervises a person in the carrying out of professional engineering services within the meaning of section 115 of the Act, the registered professional engineer, in the role of the supervisor, must

- be competent in and** have sufficient knowledge of the professional engineering services carried out; and
- sufficient control over any outputs of the professional engineering services to reasonably form the view that the standard of the professional engineering services is that to be expected of a registered professional engineer; and
- take full professional responsibility for the professional engineering services provided by the supervised person.

3.7. Continue to develop knowledge, skills, and expertise:

A registered professional engineer must:

- continue to develop relevant knowledge, skills, **competence** and expertise throughout their careers, **especially in their area(s) of expertise**
- actively assist and encourage those with whom they are associated to do likewise.
- ensure that they have documented **their CPD activities** which can be used to verify that they meet certain minimum criteria in respect of **CPD of the relevant assessment entity or of the Board**

Prescriptive Standards

In last month's newsletter, we provided an article about the elements of a 'professional engineering service'. In response to that article, we have received requests for more guidance on the elements of a 'prescriptive standard.'

The term 'prescriptive standard' appears in the definition of the term 'professional engineering service' in Schedule 2 of the *Professional Engineers Act 2002* (Qld) ("**Act**"):

professional engineering service means an engineering service that requires, or is based on, the application of engineering principles and data to a design, or to a construction activity, relating to engineering, and does not include an engineering service that is provided only in accordance with a prescriptive standard

[emphasis added].

A 'prescriptive standard' is defined in Schedule 2 of the Act as follows:

prescriptive standard means a document that states procedures or criteria—

- for carrying out a design, or a construction or production activity, relating to engineering; and
- the application of which, to the carrying out of the design, or the construction or production activity, does not require advanced scientifically based calculations.

An engineering service that is provided only in accordance with a prescriptive standard does not need to be provided by an RPEQ and operates as an **exception** to the requirements of the Act. If a person carries out an engineering service that is provided only in accordance with a prescriptive standard, that person will **not** contravene the Act. It is therefore vitally important for RPEQs and engineering

businesses to understand exactly what a prescriptive standard is, so they may ensure they are not mistakenly assigning tasks to non-RPEQs that are not, in fact, engineering services carried out only in accordance with prescriptive standards.

The following elements must be satisfied for an engineering service to be provided only in accordance with a prescriptive standard:

1. It must be a **document**.
2. It must state **procedures** or **criteria**.
3. It must state **how** those procedures or criteria are applied to the carrying out of a **design**, or a **construction or production activity, relating to engineering**.
4. The application of those procedures or criteria **must not require advanced scientifically based calculations**.
5. The engineering service in question must be provided **wholly** in accordance with the prescriptive standard.

The prescriptive standard must be a document. A document is something on which information is recorded. A document includes: (a) any paper or other material on which there is writing; (b) any paper or other material on which there are marks, figures, symbols or perforations having a meaning for a person qualified to interpret them; and (c) any disc, tape or other article or any material from which sounds, images, writings or messages are capable of being produced or reproduced (with or without the aid of another article or device). A prescriptive standard cannot be a procedure or criteria that is not physically recorded or documented in some way. Therefore, procedures or criteria carried out from memory, without being documented in any way, cannot be a prescriptive standard.

The document must state procedures or criteria. 'Procedures' are ordinarily understood to mean modes of performing or conducting a task, and 'criteria' to mean principles or standards by which something is judged. If the document does not state procedures and criteria, it cannot be a prescriptive standard.

The document must detail and explain exactly how the procedures or criteria are to be applied. If the document does not do so, it cannot be a prescriptive standard. Questions have been raised regarding the example of a prescriptive standard given with the definition – *AS/NSZ 300:2007 – Electrical installations (known as the Australian/New Zealand Wiring Rules), published by Standards Australia*. Many Electrical RPEQs believe that these rules are not prescriptive and require judgement and choice. Consideration is being given to this being removed as an example in the amendments to the Act that will be going to Parliament.

The use of the word 'prescriptive', which means 'laying down the rules of usage', means there must be **little or no room for personal choice or judgement** in the application of the procedures or criteria stated in the document. Particularly relevant is whether the procedures or criteria stated in the document require a choice or judgement, based on engineering knowledge or experience, to be made in applying them. If they do, the document cannot be a prescriptive standard.

The application of the procedures or criteria stated in the document must not require advanced scientifically based calculations. Consistent with the first object of the Act as stated in section 3, which is to protect the public by ensuring professional engineering services are provided by an RPEQ, advanced scientifically based calculations are calculations that could only be performed by a person with the level of knowledge and experience required of an RPEQ. Calculations required by a prescriptive standard must be calculations that could be performed by a person without such a level of knowledge and experience. If calculations stated in a document could be performed only by a person with the level of knowledge and experience required of an RPEQ, the document cannot be a prescriptive standard.

Finally, the engineering service in question must be **wholly** provided in accordance with the prescriptive standard. Many RPEQs will remember that when the Act was first introduced in 2002 the definition of a professional engineering service was different, solely because of how it referred to the exception for work carried out in accordance with a prescriptive standard. The definition previously read as follows:

“professional engineering service” means an engineering service that requires, or is based on, the application of engineering principles and data to a design, or to a construction or production activity, relating to engineering, and does not include an engineering service that may be provided in accordance with a prescriptive standard.

[emphasis added]

Previously, if it was possible to provide a service in accordance with a prescriptive standard, the exception applied. However, the definition was amended in 2008 to remove the words “*may be provided*”, and now states that the exception only applies to “*an engineering service that is provided only in accordance with a prescriptive standard.*” The Explanatory Notes relating to this amendment state that:

The amendment of the definition of ‘professional engineering service’ in Schedule 2 is to clarify that the exclusion from the definition applies only to an engineering service that is **wholly** provided in accordance with a prescriptive standard.

[emphasis added]

From this, it is clear that the entire engineering service in question must be provided in accordance with the prescriptive standard for the exception to apply. If any part of the engineering service is not provided in accordance with a prescriptive standard, then the exception will not apply, and the service should properly be carried out by an RPEQ or under the direct supervision of an RPEQ responsible for the service.

I hope this has been of interest to you and if you have anything you would like to see in future newsletters please do not hesitate to contact me.

I regularly undertake presentation on the Professional Engineers Act and its requirements to various organisations and to groups ranging from 5 persons to over 100. If you are interested in a presentation please contact the Registrar: Clare Murray on (07) 3224 4632 or e-mail clare.murray@bpeq.qld.gov.au.

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The Registrar