

Submission to Productivity Commission Review of Regulatory Burden on the Upstream Petroleum (Oil & Gas) Sector.

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VARYING STANDARDS FOR ELECTRICAL COMPLIANCE ON DRILLING RIGS BROUGHT INTO AUSTRALIA AND MOVED BETWEEN STATES IN AUSTRALIA

AWE Western Region brings to the attention of the Productivity Commission the differing standards that apply to land based drilling rigs.

AWE Western Region is a member of a “Rig Club” currently arranging for the import into Western Australia of the Weatherford Drilling International Rig 826. This is a new build rig which will drill its first well in Western Australia in early 2009.

The rig was built in the United States of America to the American Petroleum Standards RP500 & RP505. The rig, as built, meets American standards for operational onshore oil and gas drilling rigs.

Before the rig can be given approval to drill in Western Australia it must meet Australian Standards, which include:

- STATE OF WESTERN AUSTRALIA PETROLEUM ACT 1967.
 - SCHEDULE OF ONSHORE PETROLEUM EXPLORATION AND PRODUCTION REQUIREMENTS – 1991
- AUSTRALIAN STANDARDS CODE (GENERAL).
- AUSTRALIAN STANDARDS CODE – AS/NZ 3000 : 2000 ELECTRICAL CODE
- WESTERN AUSTRALIAN GOVERNMENT ELECTRICAL REGULATIONS CODE.
- MANUFACTURER’S CODE FOR OPERATIONAL REQUIREMENTS.
- HAZARDOUS AREA REQUIREMENTS – API – AS/NZ STANDARDS CODE – SOPEPR 1991.
- AMERICAN PETROLEUM INSTITUTE (API). (Recommended Practices for Classification of locations for Electrical Installations at Petroleum Facilities Classified as API RP505 - Class 1, Zone 0, Zone 1 & Zone 2. – API RP 500 Class 1, Division 1, & Division 2.

The WA regulations state the following:

- (1) Subject to the requirements of any act or any other directions, all electric wiring, earthing and installations used in petroleum exploration or production

operations shall comply with the relevant requirements of Australian Standard 3000 "SAA Wiring Rules".

- (2) Hazardous locations on or about a drilling rig, and during well servicing or well testing operations, in relation to which the provisions of Class 1, Zone 1 and Class 1, Zone 2 of the SAA Wiring Rules that will apply are as follows:
 - (a) Class 1, Zone 1: all areas classified as division 1 in A.P.I. RP500B "Classification of Areas for Electrical Installations at Drilling Rigs and Production Facilities on Land and on Marine Fixed and Mobile Platforms".
 - (b) Class 1, Zone 2: the total mast space, all areas within 15m of a well or temporary production facility, and all areas within 12m of an area classified as Class 1, Zone 1, other than mud tanks containing oil-free drilling fluids downstream of the shale shaker tank (in which case the Class 1, Zone 2 classification will apply for a distance of 3m from the top of such tanks).
- (3) Within an area classified as Class 1, Zone 2 under sub-clause (2) -
 - (a) The Director may approve the use of electrical equipment of vapour tight construction that is totally enclosed and gasketed to exclude or resist the passage of vapour; and
 - (b) All electrical connectors (such as plugs and sockets) shall have a seal, acceptable to an Inspector, to prevent inadvertent breaking of any electrical circuit that is capable of producing arcing or sparking.
- (4) Hazardous locations for all production and processing operations shall be defined in accordance with Australian Standard 2430 "Classification of Hazardous Areas" and details of those locations shall be furnished to the Director or an Inspector on request.

The difference in the American and Australian standards and the extra requirements placed on rig operators mean that before any rig can begin operations in Western Australia work has to be undertaken to bring the rig into line with the Western Australian requirements. The estimated cost and time for the rectification work for rig 826 is four weeks and more than one million dollars.

In addition there is a difference between the requirements of Australian States. For example the difference between Queensland and Western Australia relating to clause 2(b) above is an additional distance of 12 m added to the class1, zone 2 area in WA (i.e. as opposed to 3 m). This means that work is required to allow a rig to be moved from state to state. The differing requirements also complicate the recruitment of specialist trades, for example electricians. Any work that has to be done because of the differing standards is an extra burden on proponents. The cost of the differing standards is an added regulatory burden which could be avoided.

SUMMARY

There are two issues presented in this submission;

- 1 The differing standards that apply in the USA and Australia. The question has to be asked why is it that a developed country like the USA that operates many more land rigs than Australia is able to operate to an accepted standard such as API standards whilst Australia can't apply these standards which are accepted as "good oil field practice".
- 2 The differing standards applied in Australian States which should be an easier limitation to overcome.