



Environment Quality Division



## **Fuel Quality Standards Act 2000**

# **CLEAN FUELS BULLETIN**

## **OCTOBER 2002**

### **MONITORING, COMPLIANCE AND ENFORCEMENT**

Since the fuel sampling program commenced in April 2002, a total of 516 samples have been taken from fuel supply sites across Australia. Of these, 158 were taken in NSW, 107 in Victoria, 78 in Queensland, 42 in Western Australia, 41 in South Australia, 30 in Tasmania, 27 in the ACT and 33 in the Northern Territory. These samples include unleaded petrol, premium unleaded petrol, lead replacement petrol and diesel. The spread of samples across jurisdictions is based on the percentage of the national fuel market in each State or Territory. A number of samples are also collected in response to fuel quality incident reports received.

The samples have been tested for compliance with the first set of petrol and diesel fuel quality standards that came into force on 1 January 2002. This set of standards is referred to as 'environmental' standards as they address parameters that have a direct impact on vehicle emissions. Testing for compliance with the 'operability' standards that were introduced on 16 October 2002 will commence shortly. These standards address those parameters of petrol and diesel that do not have a direct impact on emissions but, if not controlled, can have an adverse impact on the efficient operation of the engine.

Consultation with fuel producers and importers is currently under way on the requirements for the annual statements on the quality of fuel produced or imported during the 2002 calendar year. As required under section 67 of the *Fuel Quality Standards Act 2000*, the first statements are due on 14 February 2003.

### **NEW FUEL QUALITY STANDARDS**

#### **Operability standards for petrol and diesel**

The Minister for the Environment and Heritage, the Hon Dr David Kemp, has amended the *Fuel Standard (Petrol) Determination 2001* and the *Fuel Standard (Diesel) Determination 2001* to incorporate new operability standards. The following operability standards came into effect on 16 October 2002:

#### **Petrol operability standards**

<b>Fuel Parameter</b>	<b>Fuel grade</b>	<b>Specification</b>	<b>Referee Test Method</b>
MON	PULP	85.0 (min)	ASTM D2700
	ULP	81.0 (min)	ASTM D2700
	LRP	82.0 (min)	ASTM D2700
Copper Corrosion (3 hrs @ 50°C)	All	Class 1 (max)	ASTM D130
Existent Gum (washed)	All	50 mg/L (max)	ASTM D381
Induction Period	All	360 minutes (min)	ASTM D525

## Diesel operability standards

Fuel Parameter	Specification	Referee Test Method
Carbon Residue (10% distillation residue)	0.2 mass % max	ASTM D4530
Water and sediment	0.05 vol % max	ASTM D2709
Conductivity @ambient temp	50 pS/m (Min) @ambient temp (only applies at terminals / refineries / major distribution centres)	ASTM D2624
Oxidation Stability	25 mg/L max	ASTM D2274
Colour	2 max	ASTM D1500
Copper Corrosion (3 hrs @50°C)	Class 1 max	ASTM D130
Flash point	61.5°C min	ASTM D93
Filter blocking tendency	2.0 max	IP 387
Lubricity	0.460 mm (max) (only for diesel containing less than 500ppm sulfur)	IP 450

A copy of the *Fuel Standard (Petrol) Amendment Determination 2002 (No.1)* and the *Fuel Standard (Diesel) Amendment Determination 2002 (No.1)*, which amend the Petrol and Diesel Determinations to insert the operability standards, will be available in the near future from Government Information shops, from [www.scaleplus.law.gov.au](http://www.scaleplus.law.gov.au), or by emailing [fuel.quality@ea.gov.au](mailto:fuel.quality@ea.gov.au).

The following operability parameters have not, at this stage, been put to the Minister for decision:

- for petrol: drivability index, flexible volatility index, colour and appearance (in relation to a drivability index specification, this is unlikely to be resolved until a decision is made on the maximum limit of ethanol in petrol.); and
- for diesel: appearance, acidity, cloud point and cold filter plugging point.

When the above parameters are resolved a minimum of two months notice will be provided to industry of the implementation date.

### **Biodiesel**

A public discussion paper is currently being prepared and is expected to be available later this year. The discussion paper will be posted on Environment Australia's website at: <http://www.ea.gov.au/atmosphere/transport/biodiesel/index.html>

### **Trials of higher ethanol blends**

The Commonwealth Government is conducting vehicle trials to test the impacts of higher ethanol blends on the current Australian car fleet. The Orbital Engine Company will conduct this work on behalf of Environment Australia.

The trial will investigate the impacts of 20% ethanol on the operation, emissions performance and fuel consumption of vehicles. The trials will give the Government a scientific basis on which to set the maximum level of ethanol allowable under the *Fuel Quality Standards Act 2000*.

### **Liquefied Petroleum Gas**

A Cost Benefit Analysis of options for the standard and its implementation has now been completed and will be released shortly. After further industry consultation, the Commonwealth position will be finalised and a Regulation Impact Statement will be prepared. The proposed standard is expected to be considered by the Fuel Standards Consultative Committee by the end of November 2002. We hope to have a standard in place early 2003.

## **BIOFUELS MARKET BARRIERS STUDY**

The study is progressing well and is on track to report to the Government by the end of the year. Stakeholder consultations have been invaluable in informing the study, particularly in the identification of market barriers for ethanol and biodiesel, and in developing a picture of the Australian biofuels industry.

A number of consultancies were commissioned to assist in more detailed policy development and in gathering of background data. These included:

- a desktop research project into the environmental impacts of biofuels (Deni Greene Consulting);
- an examination of the feasibility and merits of a tradeable certificate system for biofuels (McLennan Magasanik Associates and BDA Group);
- an examination of the potential of a voluntary agreement for biofuels (GHD Consulting); and
- a background survey into the biodiesel industry, conducted as part of the development of an Australian standard for biodiesel (Pacific Air and Environment).

These have now largely been completed. Work on the study is now focused on the drafting of the major report to Government. The Terms of Reference and general information about the study have been posted on the Environment Australia's biofuels website:

<http://www.ea.gov.au/atmosphere/transport/biofuels/index.html>

## **FUEL STANDARDS CONSULTATIVE COMMITTEE**

The Fuel Standards Consultative Committee (the Committee) held its fourth meeting at BP Refinery (Bulwer Island), Brisbane, on 12 August 2002. The Committee undertook a tour of the refinery before the following issues were discussed at the meeting.

- Further development of recommendations to the Minister in relation to the supply of leaded fuel to motor and water sport enthusiasts, and race engine builders/tuners.
- The research octane number (RON) parameter.
- Consideration of approvals from Central Oil Refinery and amendment of Mobil Oil Australia's Cleanerburn™ approval.
- Update on the implementation of operability standards for petrol and diesel fuel.
- Discussion of the draft Administrative Guidelines for the Register of Prohibited Additives.
- Updates on the following matters:
  - implementation of operability standards for petrol and diesel fuel
  - work of the low density diesel working group
  - the study on alternatives to Avgas for the Comgas Scheme
  - update on the work of the Clean Fuels and Vehicles Section

The Committee will continue to address urgent matters arising prior to the next meeting, which will be on 19 February 2003 in Canberra.

## **APPROVALS GRANTED UNDER THE ACT**

The Minister has granted Central Oil Refineries Pty Ltd an approval to allow the supply of diesel with a minimum density of 790 kg/m<sup>3</sup>. The period of operation of the approval is from 24 September 2002 to 1 January 2003. The approval is for a short period only because a working group of the Fuel Standards Consultative Committee is developing recommendations for the longer term in relation to indigenous light density diesel.

## **LOW DENSITY DIESEL WORKING GROUP**

The Low Density Diesel Working Group has provided a report to the Fuel Standards Consultative Committee, which is currently being considered.

### **AMENDMENTS TO THE PETROL AND DIESEL DETERMINATIONS**

On 15 October 2002, the Minister amended the *Fuel Standard (Petrol) Determination 2001* (the Petrol Determination) and the *Fuel Standard (Diesel) Determination 2001* (the Diesel Determination).

The *Fuel Standard (Petrol) Amendment Determination 2002 (No. 1)* amended the Petrol Determination in the following ways:

- insertion of petrol operability standards;
- deletion of clause 3(6) with the resulting effect that all exemptions from the national fuel standards (except for aircraft use of avgas) would be addressed through the approvals mechanism in the *Fuel Quality Standards Act 2000*; and
- amendment of the Research Octane Numbers for ULP, PULP and LRP to include “.0”.

The *Fuel Standard (Diesel) Amendment Determination 2002 (No. 1)* amended the Diesel Determination in the following ways:

- insertion of diesel operability standards; and
- clarification that the Diesel Determination applies to automotive diesel.

A copy of the *Fuel Standard (Petrol) Amendment Determination 2002 (No. 1)* and the *Fuel Standard (Diesel) Amendment Determination 2002 (No. 1)* can be purchased at a Government Info shop, downloaded from [www.scaleplus.law.gov.au](http://www.scaleplus.law.gov.au), or by emailing [fuel.quality@ea.gov.au](mailto:fuel.quality@ea.gov.au).

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