

**Fuel Quality Standards Act 2000****CLEAN FUELS  
BULLETIN****April 2002****PUBLIC RELATIONS**

The commencement of the new petrol and diesel standards on 1 January 2002 required intense public relations activities and the provision of advice to stakeholders. The Minister issued a media release, *New fuel standards for cleaner air and better health*, on 30 December 2001, and numerous articles have been placed in journals and newsletters. Information summarising obligations under the *Fuel Quality Standards Act 2000* (the Act) was also provided to the Australian Institute of Petroleum, the Australian Petrol Agents and Distributors Association and the Motor Trades Association of Australia, for distribution to their members via industry newsletters and websites.

In response to the large number of enquiries from fuel suppliers and avgas users regarding the supply of leaded fuels, an advertisement, *Invitation to motor and water sports enthusiasts*, was placed in the major newspapers of each State and Territory over the weekend 2/3 February 2002. This advertisement invited expressions of interest from interested stakeholders wishing to be listed as an exempt organisation or to apply for an approval varying a fuel quality standard made under the Act.

Three brochures have been published:

- *Better Fuel...Cleaner Air* - containing general information about the legislation;
- *What do they mean for the Petroleum Industry?* - aimed at the petroleum industry and summarising obligations under the Act; and
- *Monitoring, Compliance, Enforcement* - for use by inspectors who are appointed under the Act. This brochure sets out, in general terms, inspectors' powers and obligations, and is provided for information when fuel sampling is undertaken.

These brochures are being disseminated to state and territory fair trading, environment protection and consumer affair departments, and the key industry representative bodies. Copies can be obtained by emailing a request to [fuel.quality@ea.gov.au](mailto:fuel.quality@ea.gov.au).

**MONITORING, COMPLIANCE AND ENFORCEMENT**

The Monitoring, Compliance and Enforcement (MCE) team in Environment Australia's (EA) Clean Fuels and Vehicles Section has also been focussing on providing advice to stakeholders about their obligations under the Act, and preparing for the commencement of fuel testing under the fuel sampling program. A number of organisations and government departments have commented on the draft Sampling Procedures Manual and Investigation Management Plan. The practices and procedures for fuel sampling and investigations under the Act are prescribed in these documents. One hundred and twelve inspectors have been appointed to undertake fuel sampling and provide investigation services. EA has now provided two Certificate IV in Government (Fraud Control) Investigation courses for inspectors. Confidential sampling timetables have been distributed for the first quarter of this year.

Other aspects of the MCE Program include the information sharing arrangements between EA and State and Territory government departments. These arrangements are in preparation, as are the Memoranda of Understanding for similar intelligence sharing with motoring organisations. The MCE team is already acting in accordance with the response strategy developed for the MCE Program to fuel quality issues and incident notification from other agencies and the general public. This information will be recorded in the information management system designed to accommodate the MCE program's activities.

## **APPROVALS GRANTED UNDER THE ACT**

### **Grant of approval to Moama Refinery Pty Ltd**

The Minister for the Environment and Heritage, the Hon Dr David Kemp, has granted Moama Refinery Pty Ltd a conditional approval, which will operate from 2 April 2002 until 1 January 2003. The approval is for a short period only because the Fuel Standards Consultative Committee (FSCC), established under the Act, has formed a working group to develop recommendations for the longer term regarding indigenous light density diesel. The working group is expected to report back to the Committee by October 2002.

Moama Refinery, Australian Petroleum Supplies Pty Ltd, and Biofuel Australia Pty Ltd are permitted to supply diesel with a minimum density specification of 790kg/m<sup>3</sup> provided retailers of the diesel ensure that information is available at the bowser to advise consumers that they are purchasing diesel with a lower density than that prescribed in the *Fuel Standard (Diesel) Determination 2001*. All diesel pumps supplying diesel produced by Moama Refinery Pty Ltd must display in a conspicuous position beside or on each diesel pump, in letters at least 40 millimetres high, words indicating that the fuel is a low density diesel and that consumers are advised to check current vehicle warranty's regarding the use of low density diesel. It is also a condition of the approval that Moama Refinery informs Australian Petroleum Supplies Pty Ltd and Biofuel Australia Pty Ltd about the conditions attached to the approval within the time period prescribed in Regulation 7 of the *Fuel Quality Standards Regulations 2001*.

### **Cleanerburn™ diesel**

The Minister has granted an approval under the Act allowing Mobil Oil Australia to supply diesel with a sulfur content over 500ppm sulfur with the fuel additive Cleanerburn™. Other fuel suppliers covered by the approval include the Shell Company of Australia Ltd, Caltex Australia Ltd, BP Australia Ltd and Trafigura Fuels Australia Pty Ltd. The approval is conditional upon retailers supplying information at the bowser to advise consumers that they may be purchasing diesel with up to 1300ppm sulfur and the Cleanerburn™ additive as an alternative to 500ppm sulfur diesel. Mobil is also required to provide six-monthly reports to EA regarding its progress in upgrading the plant at Altona to produce 50ppm sulfur. The first of these reports is to be provided by 31 January 2003. The approval will operate from 31 December 2002 until 30 June 2004.

### **Variation of approval granted to IOR Energy Pty Ltd**

The Minister has further amended the approval granted to IOR Energy Pty Ltd on 8 November 2001. The approval permits the supply of diesel fuel with a minimum density level of 790 kg/m<sup>3</sup> produced at the IOR refineries at Eromanga and Cuddapan. The amendment permits the following companies to supply IOR's light density diesel: The Shell Company of Australia Ltd; Caltex Australia Ltd; BP Australia Limited; Transwest Fuels Pty Ltd; Sunstate Fuels Pty Ltd; Fosters Petroleum Pty Ltd; Caltex Winton Roadhouse; Simpson Desert Oasis; Hi Trans Express Pty Ltd; Petro Fuel and Lubricants Pty Ltd; and Lowes Petroleum Services Pty Ltd. The approval as amended operates until 1 January 2003.

### **Grant of approval to the Indian Ocean Oil Company (IOOC)**

The Minister has granted an approval to the IOOC in respect of the diesel fuel the IOOC has imported into, and supplies in, the Territory of Christmas Island. From 13 March 2002 until 1 October 2002 the IOOC is permitted to supply diesel with a distillation specification of T90 at 370°C max.

## Variation of approval granted to the Department of Health

The Acting Minister for the Environment and Heritage, Senator the Hon Amanda Vanstone, varied the approval granted to the Department of Health and Aged Care on 8 November 2001 by the then Minister for the Environment and Heritage, the Hon Senator Robert Hill. The approval permits the supply of avgas to about 33 Aboriginal communities under the Comgas Scheme (the Scheme) administered under the Commonwealth's Aboriginal and Torres Strait Islander Substance Use Program. The Scheme is a long-term approach to address the issue of petrol sniffing in remote communities through education, prevention, rehabilitation and treatment. The variation extends the list of 'regulated persons' specified in the approval. The variation also updates the name of the Department to the Department of Health and Ageing. The approval operates until 11 January 2003.

## Grant of approval to Gaseng Petroleum Pty Ltd

The Acting Minister for the Environment and Heritage, Senator the Hon Amanda Vanstone, granted Gaseng Petroleum (Christmas Island) Pty Ltd an approval permitting it to supply diesel that distils 95% at about 378°C, and petrol with a sulfur content of about 300 mg/kg sulfur in the Territory, between the period 16 January 2002 to 1 October 2002.

## OTHER NEW FUEL QUALITY STANDARDS

### Proposed operability standards for petrol and diesel

The Department of Industry, Tourism and Resources (ITR) has been the lead agency for the development of proposed operability standards for petrol and diesel. ITR is preparing these standards in consultation with EA, the Australian Institute of Petroleum, the Federal Chamber of Automotive Industries, and other stakeholders. A regulation impact statement is currently being prepared and drafting instructions have been sent to the Office of Legislative Drafting. If approved, these standards will be included in the *Fuel Standard (Petrol) Determination 2001* and the *Fuel Standard (Diesel) Determination 2001*. Finalisation of the proposed operability standards is on track for implementation from 1 July 2002.

### For petrol:

Fuel Parameter	Fuel grade	Specification	Referee Test Method
MON	PULP	85.0 (min)	ASTM D2700
	ULP	81.0 (min)	ASTM D2700
	LRP	82.0 (min)	ASTM D2700
Flexible Volatility Index	All	As per seasonal and location tables (Figure 4)	Calculated = Vapour Pressure (@37.8°C) + 0.7* E70, where vapour pressure is measured as per ASTM D4953)
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 mins (min)	ASTM D525
Colour	PULP	Yellow	Visual
	ULP	Purple / Bronze	Visual
	LRP	Red / Orange	Visual
Appearance @ 20°C	All	clear and bright	Visual

### For diesel:

Fuel Parameter	Specification	Referee Test Method
Carbon Residue(10% distillation residue)	0.3 mass % max	ASTM D4530
Appearance @ 25 <sup>0</sup> C	Clear and bright	Visual
Water and sediment (this test is only performed if the Appearance test is failed)	0.05 vol % max	ASTM D2709
Cloud point and Cold Filter Plugging Point	Reproduce seasonal and location tables : Table 2 and Table 3 in AS3570– 1998 (copyright issue yet to be clarified)	ASTM D2500 (for CP) or IP 309 (for CFPP)
Conductivity @ambient temp	50 pS/m (min) @ambient temp. (only applies at terminals/refineries/major distribution centres, not at retail level)	ASTM D2624
Oxidation Stability	25 mg/L max	ASTM D2274
Colour	2 max	ASTM D1500
Acidity	Total 0.08 mg KOH/g (Max) Strong nil	ASTM D974
Copper Corrosion (3 hrs @50 <sup>0</sup> C)	Class 1 max	ASTM D130
Flash point	61.5 <sup>0</sup> 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)	IP450

### Liquefied Petroleum Gas (LPG)

In December 2000, the Commonwealth commenced a process for developing LPG standards. A working group comprising industry and Commonwealth members was established to assist EA in the preparation of a discussion paper. The discussion paper was released in October 2001, with submissions closing 14 December 2001. However, all LPG fuel suppliers and producers requested a one month extension which was granted, and 36 submissions have been received. Submissions have not adequately addressed the associated costs and benefits of the standards, and a Cost Benefit Analysis is being commissioned.

### Biofuels

Biofuels are increasingly part of the fuels scene in Australia. The Government's election commitment, *Biofuels for Cleaner Transport*, reaffirmed the importance of biofuels such as biodiesel in meeting Australia's transport task. For EA, this requires a comprehensive process which may eventually lead to setting a fuel quality standard for biodiesel. The consultative process will commence in the second half of 2002.

The introduction of the new fuel standards for petrol and diesel and the setting up of a national compliance and enforcement process, in conjunction with the States and Territories, has been very resource intensive and has resulted in commencement of the biofuels program being delayed by some months.

## **Compressed Natural Gas**

A process will commence in 2002 to assess requirements for a fuel quality standard for compressed natural gas. Interest in this process (and in particular, additions to the list of stakeholders) can be registered by emailing your full mailing address to [fuel.quality@ea.gov.au](mailto:fuel.quality@ea.gov.au).

## **Ethanol Limit in Petrol**

Under the national fuel quality standards setting process, a 10% ethanol limit in petrol was proposed. This is the typical blend utilised internationally and is known not to impact on engine durability or to require engine modifications. All stakeholders supported the E10 position, except the Australian Biofuels Association (ABA), who claimed that higher ethanol blends (up to 20%) have no adverse impacts on vehicle operability and performance. ABA proposed that EA conduct a vehicle trial to test these claims. On 8 May 2001, the Commonwealth deferred a decision on the ethanol limit in petrol for 12 months to allow completion of studies, which will provide a scientific basis for setting the appropriate level of the cap.

In response to that decision, EA established an Ethanol Task Force (consisting of Government and industry representative) to explore the issues surrounding ethanol use in petrol. A paper outlining these issues was released for a two month public comment period which closed on 15 March 2002. To date, 31 submissions have been received. The Ethanol Task Force is meeting on 5 April 2002 to review the submissions and discuss the next steps in the process.

## **FUEL ADDITIVES**

The Environment Protection and Heritage Council (Environment Ministers from each jurisdiction) is considering whether Council should have a role in the national management and assessment of additives. A draft paper will be considered by Council in April 2002.

## **FUEL STANDARDS CONSULTATIVE COMMITTEE**

The FSCC met for the third time in Canberra on 25 February 2002, although it worked fairly continuously over December/January via email. The following issues were discussed at the meeting:

- Consideration of approvals from IOR Energy Pty Ltd, the Indian Ocean Oil Company Pty Ltd and Moama Refinery.
- The FSCC formed a working group to examine the need for any change to the minimum density specification for automotive diesel. The working group will report back to the FSCC by October 2002.
- The FSCC agreed that the working group on the use of 'off-spec' fuels in motor and water sports would revise its draft policy principles and circulate those to members intersessionally.

## **OTHER DEVELOPMENTS**

### **Hydrogen fuel cell trials**

The Commonwealth is providing a grant of \$2.5 million in support of the trial of three hydrogen fuel cell buses in WA. This new technology eliminates exhaust emissions, and has the potential to reduce greenhouse emissions from buses. It will also achieve a major reduction in vehicle noise. As emissions from motor vehicles are the most significant source of urban air pollution, the trial has great implications for the health of all Australians.

The trial will be conducted by the WA Government in collaboration with DaimlerChrysler and BP Australia. The trial is part of the European Hydrogen trial which includes 33 fuel cell buses in 10 European cities. As well as looking at the environmental benefits and issues of using hydrogen fuel cell technology, the

trial will assess operational issues such as safety; hydrogen production and infrastructure; regulatory requirements; the financial implications of its introduction; and consumer reaction to and acceptance of the technology. The buses are expected to arrive in Perth in June 2003 and the trial will run for two years.

### **Diesel NEPM**

The Commonwealth is providing \$40 million over the next four years in support of the development and implementation of the in-service emissions testing capabilities for diesel and petrol vehicles, where diesel emissions testing is in connection with the making of the Diesel National Environment Protection Measure (NEPM). The NEPM coming into effect on 29 June 2001 provides a set of guidelines for reducing emissions from diesel vehicles. One of the guidelines provides for an emissions test and repair program. Any testing programs established will use a unique new test for diesel emissions developed in connection with the making of the NEPM to identify high emitters.

This is part of a range of measures, including the introduction of new national fuel quality standards and new vehicle emissions standards, that the Commonwealth is taking to reduce pollutants from vehicles and combat serious respiratory illness in the community. Research now shows that while vehicles are getting cleaner, the impact of diesel vehicles on health is far greater than that of petrol-driven vehicles, so we need to ensure they are well maintained.

Diesel vehicles are among the worst polluters on the road, accounting for around 70 per cent of emissions from all vehicles of small particulates. While standards for new vehicles continue to improve, older vehicles can still produce excessive amounts of pollution. Until now it has been impossible to test in-service diesel vehicles to determine if they are exceeding emission standards. Additional information on the Diesel NEPM can be found at [www.nepc.gov.au](http://www.nepc.gov.au)

### **New emissions testing program under the Diesel NEPM**

NSW will lead Australia with the first program to be funded under the Commonwealth's Program to combat air pollution by testing diesel emissions. The NSW Government will lead by example - the State Transit Authority diesel bus fleet for the Sydney Region will be tested first. If results prove positive then the NSW Government will work closely with the trucking industry and other large fleet companies to introduce testing and audited maintenance regimes. The emissions testing and promotion of improved maintenance for diesel vehicles will be a key link in the NSW Government's strategies for improving Sydney's air quality.

Brisbane City Council will lead Queensland in their new program to combat air pollution after receiving a grant under the Commonwealth's Program. The Council will purchase testing equipment to monitor emissions from their own fleet before establishing a service and maintenance program to minimise emissions from these vehicles. The Council hope that the testing process can be adopted as a model for other large fleet operators. Council has already implemented a number of clean air measures and the test and repair program will further complement these actions.

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## **CONTACT DETAILS**

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