



MANILDRA GROUP

Commitment to Excellence

Dear Mr Gray,

Our submission relating to the proposed fuel quality standard for fuel grade ethanol is attached.

Yours faithfully

Comments on the Paper:

SETTING NATIONAL FUEL QUALITY STANDARDS

Proposed Fuel Quality Standard for Fuel Grade Ethanol.

Preamble

The Manildra Group, the largest producer of fuel grade ethanol in Australia, welcomes the opportunity of making comment on the standards for this product as recently proposed by the Department of the Environment and Heritage of the Commonwealth of Australia.

The need for change

The Manildra Group questions the need for change to be made to current industry practice for the following reasons.

The American Society of Testing Materials (ASTM) was founded in 1898 and is a scientific and technical organization formed for the “development of standards on characteristics and performance of materials ...”. It is the world’s largest source of voluntary consensus standards. ASTM standards have acted as the benchmark against which the fuel industry around the World has operated for many decades. The standards are continuously being updated or new standards introduced to take into account recent technical developments, product application and environmental regulations.

2. ASTM D4806 *Standard Specification for Denatured Fuel Ethanol for Blending with Gasolines for use as Automotive Spark-Ignition Engine Fuel* is the standard used by producers of this product throughout the USA. Some 13 billion litres of fuel grade ethanol are produced annually in the USA for blending with unleaded petrol.
3. For many years Manildra has followed the lead of the USA and has been using ASTM D4806 as its guide to product quality. Despite considerable publicity in the press and radio, an intensive field trial on a wide range of vehicles (APACE, Commonwealth of Australia, ERDC Project 339, Project 2511, 1998) and an extensive survey by the NRMA of its members no evidence has been produced over the last 10 years which showed that Manildra ethanol blended fuels have resulted in engine damage or poor driveability.
4. Current and proposed specifications are compatible with the latest ASTM D4806-04a ethanol specifications. (Attachment A)

In summary, the existing ASTM specifications for fuel grade ethanol have not been shown to be deficient and no argument has been made for the need to change. We argue that the frequent amendments made by the ASTM to their fuel standards is more than adequate to safeguard the Australian motoring public.

Comments on the Specifications as Proposed

Manildra would agree that the specifications of the ethanol should be such that when used for blending the composition of the blended mixture should be compatible with the recently gazetted standards for petrol.

Some specific comments follow:

- Table 1 should be headed Proposed Australian Fuel Grade Ethanol Standards. Denaturants and corrosion inhibitors are not components in what is generally accepted as ethanol.
2. The ethanol content should be stated as excluding water. The proposed specification is much tighter than the current ASTM level. It is likely that some future producers will have trouble meeting this specification as fusel oil is invariably produced as a by-product of fermentation

and its level is feedstock dependent. If the fuel grade ethanol contains 1% of moisture and 5% of denaturant, which are both allowed, it can contain absolutely nothing else. ASTM Standard is preferable.

3. The methanol recommended level is much tighter than that required by ASTM. Some producers using feedstocks different from those currently used by Manildra may have problems meeting this standard. The rationale for setting the recommended level, as stated in the discussion paper, is based on the corrosive properties of methanol. Fuel grade ethanol containing 0.2% methanol will be out of specification. The blended fuel coming into contact with the engine will contain one-ninth this level, that is 0.02%. There is no evidence in the literature which shows that methanol at this level is corrosive.
4. The test method BP2002 for the non-volatile matter should be discarded as better methods exist. ASTM D381
5. Although very limited testing has shown that Manildra fuel grade ethanol meets the levels recommended for sulfur. ASTM does not specify phosphorus – if this element is to be specified we would recommend adoption of the existing standard for ULP ie 0.0013g/L.

Some Volatility Issues

The proposed fuel grade ethanol standard is to be a NATIONAL standard.

2. Current NATIONAL standards for petrol and diesel fuels do not address fuel volatility in terms of Reid Vapour Pressure (RVP), and in order to maintain a consistent approach to NATIONAL fuel standards neither should the proposed NATIONAL standard for fuel grade ethanol.
3. Under existing arrangements, State Governments may legislate to regulate RVP of motor fuels, and where this is the case, the sale of E-10 blends is subject to a 7Kpa (see attachment B1,B2) RVP waiver. We would expect that this situation will continue. Should the State Governments relinquish determination of volatility issues to the Federal government we would argue that RBOB fuels are not the way ahead. These fuels are expensive to produce and must increase the price of an essential commodity.
4. The requirement to use R.BOB base fuel for ethanol blending places the ethanol industry in the hands of the oil refiners, who may elect not to on-sell the base fuel to ethanol blenders.

A precedent exists, where refiners currently will not sell high octane (98) to independent retailers.

5. The fuel volatility index (FVI) has already been the subject of an extensive study by officers of the department of Trade Industry and Resources. The outcome of this study was the FVI should be left to individual refiners and did not require federal regulations. (see attachment C).