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Panel Discussion: The Impact of U. S. Environmental Regulations on ASTM Standards

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The purpose of the symposium presentations was to alert ASTM subcommittees to the problems and challenges of the next 5 to 10 years so that appropriate ASTM fuel specifications and test methods can be developed and kept up to date. The three subcommittees, which sponsored the symposium, were therefore given the opportunity to comment on the proceedings.

Subcommittee A on Gasoline was represented by its chairman, R. L. Furey of General Motors. Subcommittee A has been feeling the pressure caused by new regulations for some time. As one example he cited the continuing changes in D4814, Specification for Automotive Spark Ignition Engine Fuel, which in 1991 alone saw three successive ballot changes to keep the specification current. Furthermore, the subcommittee has expanded its efforts to include two new specifications, including one for ethanol for blending into motor gasoline and the other a proposed specification for M85, a motor-grade methanol. The subcommittee now has 8 active task forces one of which is dealing with reformulated gasoline. Lastly, the chairman expects that future specification efforts will have to include environmental effects on gasoline performance requirements.

The incoming chairman, S. R. Westbrook of Southwest Research Institute, spoke for Subcommittee E on Burner, Diesel and Gas Turbine Fuels. He mentioned the wide variety of fuels under Subcommittee E, encompassing both distillate and residual fuels with a diversity of uses. The primary current emphasis is on highway diesel fuel which will meet the 1993 requirements of the Clean Air Act Amendments. Here, specifications for two grades of low sulfur fuel are being balloted and need to be on hand for June 1993. Additional diesel fuel properties being considered include a maximum aromatic content such as is being ordered by the California Air Resources Board (CARB), a fuel lubricity requirement for the low sulfur grades and a possible tightening of the diesel fuel specification to include a higher minimum cetane, a minimum heat content and a stability provision. A new specification for compression ignition methanol is in the final preparation stage.

In the heavy fuels area, Subcommittee E is active in the development of test methods for hydrogen sulfide in the liquid and vapor phase of such fuels for safety and environmental reasons. Additionally, the subcommittee is monitoring proposed CARB regulations on the control of sulfur oxides, nitrogen oxides and particulate emissions from marine vessels in coastal waters to see whether fuel specification changes may result from such regulations.

The chairman of Subcommittee J on Aviation Fuels, A. T. Peacock of Boeing, pointed out that, unlike other fuels, jet fuel properties are not directly affected by the Clean Air Amendments. However, this indirect involvement creates its own problems because it becomes much more difficult to estimate the ultimate impact on jet fuel. The existing jet fuel specification, D1655, is already more complex than any other ASTM fuel specification and further restrictions should be avoided, if at all possible. Like the preceding Aviation Panel speakers, he emphasized the absolute necessity of early notification of any proposed specification changes. He suggested that the intervening waiting period might be used to investigate the effects of different types of aromatics, particularly those not in current jet fuels. Possible changes in light ends should also be studied in view of probable motor gasoline reformulation. The use of JP-8 in the continental United States should be considered in terms of its impact on commercial jet fuel quality. In conclusion he stressed the need for increased company support of ASTM activities, even though times are difficult in the aviation industry.