Appendix I

NIST Handbook 130 – Uniform Engine Fuels and Automotive Lubricants Regulation

Items:

237-9: 2.XX. Requirements for Hydrogen Fuel

237-10: Section 1. Definitions, Hydrogen Fuel for Internal Combustion Engines and Fuel Cell Vehicles

Table of Contents

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California FUEL CELL PARTNERSHIP
DRIVING FOR THE FUTURE

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January 17, 2012

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Lisa Warfield
David Sefcik
Juana Williams
NIST Office of Weights and Measures
1000 Bureau Drive MS 2600
Gaithersburg, MD 20899-2600

RE: The USNWG's latest recommendation for a hydrogen fuel quality specification

Dear Mrs. Cardin, Mrs. Warfield, Mr. Sefcik, and Mrs. Williams,

The California Fuel Cell Partnership is a private-public partnership of auto manufacturers, energy companies, fuel cell companies, government, academia, and transit agencies. We actively collaborate to support fuel cell vehicle commercialization to help achieve California's goals for clean air, reduced greenhouse gases, and reduced petroleum use.

We would like to support the language proposed by the U.S. National Work Group's recommendation for a hydrogen fuel quality specification in its entirety. Specifically, the CaFCP supports the following position and language:

> The USNWG's latest recommendation for a hydrogen fuel quality specification is shown below. This alternate USNWG recommendation supersedes its earlier recommendation(s) that appear in L&R Committee Agenda Item 237-9 "Requirements for Hydrogen," to read:
>
> **Section 2. Standard Fuel Specifications**
>
> **2.XX.Hydrogen Fuel. – Shall meet the most recent version of SAE J2719, "Hydrogen Fuel Quality for Fuel Cell Vehicles."**
> The USNWG's latest recommendation for defining three hydrogen related terms is also shown below. This alternate USNWG recommendation supersedes its earlier recommendation(s) that appear in L&R Committee Agenda Item 237-10 "Definitions for Hydrogen Fuel for Internal Combustion Engines and Fuel Cell Vehicles," to read:
>
> **Section 1. Definitions**
>
> **1.XX. Fuel Cell. – An electrochemical energy conversion device in which fuel and an oxidant react to generate electricity without any consumption, physically or chemically, of its electrodes or electrolyte.**

(Added 201X)

1.XX. Hydrogen Fuel. – A fuel composed of molecular hydrogen intended for consumption in a surface vehicle or electricity production device with an internal combustion engine or fuel cell.

(Added 201X)

1.XX. Internal Combustion Engine. – A device used to generate power by converting chemical energy bound in the fuel via spark-ignition or compression ignition combustion into mechanical work to power a vehicle or other device.

(Added 201X).

The USNWG also agreed to recommend that modifications be made to the current NIST Handbook 130 Method of Sale Regulation definition for *"hydrogen fuel"* to ensure the term is defined the same as proposed above for the fuel regulation.

This language reflects the industry needs and was developed with the best available information provided by industry experts, including members of the California Fuel Cell Partnership.

Sincerely,

Catherine Dunwoody
Executive Director