U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

400 Seventh Street, S.W.
Washington, D.C. 20590

AUG 15 2006

Mr. Greg Dolan
Vice President, Communications and Policy
Methanol Institute
4100 North Faifax Drive
Arlington, VA 22203

Reference No. 06-0171

Dear Mr. Dolan:

This is in response to your July 17, 2006 letter on behalf of the Methanol Institute and 12 companies concerning your support for the commercialization of fuel cell technologies. In the letter, you encourage the Pipeline and Hazardous Materials Safety Administration (PHMSA) to incorporate requirements for transporting methanol fuel cells into the Hazardous Materials Regulations (HMR; 49 CFR Parts 171-180).

We will address harmonizing the requirements in the HMR for the transportation of methanol fuel cells with the standards adopted for the 14th Revised Edition of the UN Recommendations on the Transport of Dangerous Goods (UN Recommendations) in a notice of proposed rulemaking (NPRM) we plan to publish this summer under Docket HM-215I. We plan to consider incorporation of the provisions adopted in the International Civil Aviation Organization's Technical Instructions for the Transport of Dangerous Goods by Air (ICAO TI) applicable to the carriage of portable electronic devices, such as laptop computers, cellular phones, and cameras powered by fuel cell systems containing flammable liquid, formic acid, and butane in the passenger cabin of an aircraft in a separate NPRM to be published later this year. Requirements adopted in the 15th Revised Edition of the UN Recommendations and in the 2009-2010 Edition of the ICAO TI will be addressed in a subsequent international harmonization NPRM. We encourage you to review and submit comments on each of these NPRMs once they are issued.

Sincerely,

Robert A. Richard
Deputy Associate Administrator
Office of Hazardous Materials Safety

cc: Bruno Bich
Chairman and Chief Executive Officer
BIC Corporation

060171

172.101

500 BIC Drive
Milford, CT 06460

Kennett Burnes
Chief Executive Officer
Cabot Corporation
5401 Venice Avenue
Albuquerque, NM 87113

Robert "Skipp" Zeiler
Executive Director
Direct Methanol Fuel Cell Corporation
171 North Altadena Drive, Suite 101
Pasadena, CA 91107

Dr. Richard Okine
Director for Fuel Cells
DuPont Fuel Cells
P.O. Box 80701
Wilmington, DE 19880-0701

Robert Hockaday
President
Energy Related Devices, Inc.
127 Eastgate Drive
Los Alamos, NM 87544

Eric Simpkins
Vice President of Business Development
IdaTech, LLC
63065 NE 18th Street
Bend, Oregon 97701

Jay Hoffman
Business Director
Johnson Matthey Catalysts
1397 King Road
Westchester, PA 19380

Julie Kabous
Director, Government Relations
Motorola, Inc.
1350 I Street, NW, Suite 400
Washington, DC 20005

Greg Moreland

Director, Government Relations
MTI MicroFuel Cells, Inc.
431 New Karner Road
Albany, NY 12205

Jim Balcom
President and Chief Executive Officer
PolyFuel
1245 Terra Bella Avenue
Mountain View, CA 94043

Manfred Stefener
Chief Executive Officer
SFC Smart Fuel Cell AG
Eugen-Saenger-Ring 4
85649 Brunnthal-Nord
GERMANY

James L. Kaschmitter
Chairman, CEO and President
Ultracell Corporation
399 Lindbergh Ave
Livermore, CA 94551

Edmonson
§172.101
Applicability
06-0171

July 17, 2006

Dr. Robert A. Richard
Deputy Associate Administrator for Hazardous Materials Safety
Office of Hazardous Materials Safety, DHM-5
Research and Special Programs Administration
U.S. Department of Transportation
400 7th Street, S.W., Room 8421
Washington, D.C., 20590

Dear Dr. Richard:

We are writing to encourage the Department of Transportation to enact in a timely manner the international regulations for transport and use of methanol fuel cell cartridges and equipment. For the past several years, you and Dr. Ke and the rest of your staff have gone above and beyond the call of duty in working with the fuel cell industry to navigate the maze of international transport regulations. Particularly for those of us interested in the commercialization of methanol fuel cell technologies, your leadership has been invaluable.

We have achieved two critical milestones in the five years since commencing work with the DOT on micro methanol fuel cells in 2001:

- The December 2004 UN Committee of Experts adoption of model regulations providing the entry and cargo transport instructions for UN 3473, Fuel Cell Cartridges Containing Flammable Liquids; and

- Enactments of UN 3473 that are now underway by UN transportation modal agencies for aviation, maritime, road and rail transport beginning in 2007, especially ICAO's adoption of air cargo instructions and passenger allowance for methanol cartridges and fuel cell systems.

Taken together, these actions establish an international transport regulatory framework that is capable of supporting the market introduction of methanol fuel cell technologies.

This market introduction is not far away. The methanol fuel cell community is already shipping fuel cell systems and fuel cartridges to a number of military and commercial early adopters and expects to ship much larger quantities next year, as itemized in the attachment. As the DOT evaluates these UN and ICAO models for its own regulations, we believe the framework provided under UN 3473 represents a more suitable means of shipping cartridges than the present UN 1230 entry. Use of this entry has been effective but clumsy and expensive.

For example, there are packagings and restrictions specified for transport of liquid methanol product under UN 1230 that are not optimal or appropriate for articles such as fuel cell cartridges. Accordingly, the methanol fuel cell industry is preparing to comply with the UN 3473 framework.

Furthermore, the commercial ramp-up for methanol fuel cells into consumer electronics in 2007-2008 will occur during the effective date of the pending 2007-2008 ICAO Technical Instructions that provide for passenger allowance. In fact, the commercial product ramp-up arguably depends partly upon the ICAO passenger allowance. Considering the scale of the consumer electronics market, with more than over 800 million cell phones and 65 million laptop PCs sold last year, any significant commercial roll-out of fuel cells in these products will put a large number of methanol fuel cells and cartridges in transport and use, a relatively short time from now. Attachment A highlights current and near-term market introduction activities, including a short list of examples of methanol-based fuel cell product shipments underway or planned for the next year.

For these reasons we are urging the DOT to enact in a timely manner the international regulations for transport and use of methanol fuel cell cartridges and equipment. The methanol fuel cell community is available to work with the DOT in any further evaluations needed to implement this regulatory activity, and we would be happy to meet with you at your convenience. Please feel free to contact Methanol Institute Vice President Greg Dolan at (703) 425-0725 if you have any questions or would like to arrange a meeting. We thank you for your support, guidance and leadership in the development of transportation regulations for methanol fuel cell technology.

Sincerely,

BIC
Cabot
Direct Methanol Fuel Cell Corporation
DuPont Fuel Cells
Energy Related Devices
IdaTech
Johnson Matthey Catalysts
Methanol Institute
Motorola
MTI MicroFuel Cells
PolyFuel
SFC Smart Fuel Cell
Ultracell

ATTACHMENT A: Existing and pending transport of methanol fuel cell products.

Strong and rapidly rising demand for portable power has outstripped the capabilities of conventional batteries. Portable fuel cell technology has now reached the stage where size, power and cost will facilitate commercial markets for consumer electronic devices and a range of military applications. Portable fuel cells typically use methanol as their hydrogen carrier fuel. **Methanol fuel cell systems are already being sold and transported in the marketplace.** A number of major consumer electronics companies have announced plans to initiate significant commercial sales of methanol fuel cell systems in 2007/2008. By as early as 2012, methanol fuel cells could be powering 25%-30% of all laptop computers sold worldwide. *Below are just a few examples of the ongoing and growing market introduction of methanol fuel cell systems.*

- BIC is using its 30 years of expertise in lighter valve technology to create prototype fuel cell cartridges for electronics manufacturers to use in micro fuel cells. BIC distributes its products to over 3 million retail outlets in over 160 countries and will use its distribution network to build the fuel infrastructure and provide for the growing fuel cartridge aftermarket.

- Catalyst/membrane/BOP makers have seen their shipments increase from tens at a time to hundreds and some are shipping their membrane products in roll form for use in their customers' continuous process equipment. Important strategic partnerships have been set up to ensure all components in the value chain can be supplied in the correct subassembly forms for all system integrators.

- Direct Methanol Fuel Cell Corporation (DMFCC) has developed methanol fuel cartridges for fuel cell and portable electronics manufacturers. Additional methanol fuel cartridge development includes methanol based catalytic heaters for applications such as winter clothing, sleeping bags, medical equipment, etc. DMFCC works with customers to develop customized fuel cartridges for their particular applications. DMFCC plans to begin sampling methanol fuel cartridges to customers in North America, Asia and Europe in 2006. Production quantities of fuel cartridges are projected to begin shipping in 2007, ramping up significantly each year through 2012 and beyond.

- Energy Related Devices, Inc (ERD) has been developing a new mass production fuel cell technology and catalytic heaters for portable electronics, portable heaters, heat and electrical power supply applications. The MicroFuel Cell™ and Membrane Catalytic Heaters were developed in a format for mass production and low cost fuel cell systems, and have significantly more energy in methanol fuel ampoules, compared to batteries, for all kinds of portable electronic devices, body apparel heaters, food heaters. and dual portable heater and electrical power supplies. Target products are in the power range of 1 milliwatt to 15 kilowatts.

- IdaTech, LLC is developing a 250-watt Portable Power System, based on PEM fuel cell technology, that will be fueled with a methanol/water mixture delivered in ~6 pound cartridges. This system is developed for military battery charging and tactical fuel cell generation, and telecommunications, commercial remote power and high-end recreational vehicle applications. The system is commercially available today, and is expected to be qualified for military deployment in 2009.

- Motorola has been developing and testing methanol fuel cell systems, specifically 20W Reformed Methanol Fuel Cells, for several years. We have also been active in the US Fuel

Council (Chair of Portable Power Working Group for 5+ years) and regulatory activities. Motorola product groups are exploring potential fuel cell applications for field trial and deployment in the next 1-3 years.

- MTI MicroFuel Cells will be shipping over a hundred fuel cell systems and more than a thousand cartridges starting in early 2007 for product evaluation and military field trials.

- SFC Smart Fuel Cell AG (*EFOY – Energy For You*) has been shipping portable methanol fuel cell systems and cartridges internationally since 2003. Several thousand products and several tens of thousand cartridges are in use, especially for recreational vehicles (where the system is already part of the standard configuration of a number of OEM vehicles), back-up and remote power installations, international military organizations, and light electric vehicles.

- Ultracell XX25 methanol fuel cells are available for order now by qualified customers in a wide variety of market segments, including military, ruggedized PCs, satellite systems, first responders, remote monitoring and industrial applications. These systems are going through field testing in 2006, and volume production units will be sold in 2007.