

# NATIONAL HYDROGEN AND FUEL CELLS CODES AND STANDARDS COORDINATING COMMITTEE

Wednesday, October 5th, 2011

TIME: 3:00 – 4:30 pm (Eastern Daylight Time)

CALL-IN NUMBER: 866.762.9101 Access Code 7257657#

International Call-In Number 1-203-480-6527

## 1 Welcome and agenda additions

Robert Wichert requested the fueling station certifications issues be added to the agenda and this item was added under discussion topics.

## 2 Review of or corrections to September draft minutes

[http://www.hydrogenandfuelcellsafety.info/2011/sep/sep11Minutes\\_draft.pdf](http://www.hydrogenandfuelcellsafety.info/2011/sep/sep11Minutes_draft.pdf)

Chad Blake made minor changes to the September 2011 minutes. The minutes were approved after the changes were agreed on. The minutes were redistributed after the changes.

## 3 DOE/HQ Update

Antonio Ruiz

There was no DOE update.

## 4 C&S Events and Fuel Cell Safety Information

[http://www.fuelcellstandards.com/calendar\\_new.html](http://www.fuelcellstandards.com/calendar_new.html)

Kelvin Hecht

Kelvin Hecht reviewed the fuel cell standards calendar and mentioned the following three activities:

1. The Fuel Cell Seminar to be held in Orlando, FL
2. The ISO T/C 22 Meeting to be held in Michigan
3. ISO T/C 197 Working Group 12 meeting Nov 8&9

<http://www.hydrogenandfuelcellsafety.info/>

Karen Hall

Karen Hall reported that although the Safety Report is moving to a bi-monthly schedule, the calendar on the Hydrogen and Fuel Cell Safety Report website will be updated every month following the NHFCCSCC meeting. Therefore the current calendar is somewhat out of date as it is scheduled to be updated in the days following this meeting with the dates discussed during the call. The approved minutes will be posted at the same time.

<http://www.h2incidents.org/>

Steve Weiner/Linda Fassbender

Steven Weiner reported on the plenary presentations by the “H2incidents.org” and HIAD (Hydrogen Incident and Accident Database) teams at the International Conference on Hydrogen Safety (ICHS). Online demonstrations of these complementary tools were provided at the ICHS. Weiner also noted that FY2012 funding will necessitate a reduced effort for incident reporting, lessons learned and best practices work.

## 5 Discussion Topics

Discussion Leader

### Certification of Hydrogen Dispensing Stations

Robert Wichert

Robert Wichert introduced the topic of different types of certifications for hydrogen dispensing stations:

## Continued

1. Fuel quality REGULATIONS
2. Metrology certification AND TYPE EVALUATION
3. Station SAFETY certification – LISTED AND LABELED EQUIPMENT REQUIREMENTS

There was a discussion of listed fueling equipment and Robert stated that the Emeryville, CA had some listed and labeled dispensing equipment, BUT THAT THE DISPENSING NOZZLE CONNECTORS ARE NOT LISTED AND LABELED.

Larry Moulthrop stated that the Wallingford, CT station also had listed and labeled equipment and that NFPA 52 was the document to which the equipment was listed to.

John Roach discussed METROLOGY type certification in California and stated that there was an application under review for TYPE evaluation.

Mark Butler discussed a checklist that was being developed for stations.

### **Hydrogen Fuel Quality and Measurement**

SAE J2719

Mike Steele

SAE J2719 is in galley review by SAE and should be issued as a final standard shortly.

ISO DIS 14687-2

Jim Ohi

ISO DIS is moving to final standards status. The Final standard will incorporate the ASTM standards for testing for the contaminants addressed in the standard.

ASTM D.03-14 - See Attachment  
NIST

Jackie Button  
Juana Williams & Marc Buttler

### **NIST Office of Weights and Measures (OWM) on the Development of Commercial Hydrogen Measurement Standards NHFCCSCC October 5, 2011**

#### **(1) U.S. Weights and Measures Standards Development Process**

##### ***Fuel Quality Regulation***

The U.S. National Work Group (USNWG) for the Development of Commercial Hydrogen Measurement Standards continues its work to develop a final position on the hydrogen fuel quality standard. The USNWG Fuel Standard Subcommittee Technical Advisor is working closely with representatives of the fuel standards community to refine the proposals for a hydrogen fuel quality specification and related definitions of the terms (*fuel cell, hydrogen fuel, and internal combustion engine*) before the U.S. weights and measures community. On October 12, 2011 the USNWG will meet by web/teleconference to begin the final stages of its work in preparation for hearings at the January 22-25, 2012 NCWM Interim Meeting in New Orleans, LA to discuss the readiness of the specification for adoption in July 2012 at the NCWM Annual Meeting.

##### ***Commercial Device Type Evaluation Criteria***

On September 22, 2011, a draft Hydrogen Gas-Measuring Devices Checklist (general criteria) was distributed to the U. S. National Work Group for its input by October 20, 2011.

## Continued

After the USNWG's comments are incorporated into the checklist, where possible, a final draft of the checklist will be presented to the Measuring Sector for its consideration at the Sector's October 21-22, 2011 meeting in Norfolk, VA. If accepted by the Sector the last step is to request approval by the NCWM National Type Evaluation Program (NTEP) Committee to include the checklist in NCWM Publication 14. The next step will be to fully develop the remaining test procedure portion of the checklist to address all three currently recognized test methods for determining the accuracy of hydrogen dispensers.

### Fuel Cell Forklifts/Indoor Fueling

Aaron Harris

Aaron Harris was not available to provide an update. Kelvin Hecht described the first meeting of WG-6 which is intended to address forklifts.

CSA HPIT-1 which covers forklift fueling storage systems and associated components is close to releasing a draft for comment.

There have been two new documents proposed to SAE. One, tentatively numbered SAE J2601-2, would address bus fueling. The second new document, tentatively numbered SAE j2601-3, would cover forklift fueling.

## 6 Codes and Standards Organization Updates

### ISO TC 197

#### October 2011 Update

#### ANSI-Accredited U.S. TAG for ISO/TC 197, *Hydrogen technologies*

#### 1. Pending ballots

- ISO/DIS 17268.2, *Gaseous hydrogen land vehicle refuelling connection devices*  
The U.S. TAG submitted a vote of "**Approve**." The ISO ballot ends on October 6.
- ISO/FDIS 22734-2, *Hydrogen generators using water electrolysis process — Part 2: Residential applications*  
The U.S. TAG is requested to vote by October 3. The ISO ballot ends October 27.
- ISO/DIS 15869, *Gaseous hydrogen and hydrogen blends — Land vehicle fuel tanks*  
The U.S. TAG is requested to vote by October 7. The ISO ballot ends December 7.

#### 2. Ballots recently closed

- Systematic review of ISO 22734-1:2008, *Hydrogen generators using water electrolysis process — Part 1: Industrial and commercial applications*  
The U.S. TAG submitted a vote of "**Revise/Amend**." The ISO ballot ended on September 15.
- ISO/DIS 20100, *Gaseous hydrogen — Fuelling stations*  
The ISO ballot closed on August 21, and the preliminary report of voting was distributed indicating that the DIS was approved. The U.S. TAG voted "**Disapprove**."

## Continued

### 3. Meetings

- WG 14, *Hydrogen fuel - Product Specification - Proton exchange membrane (PEM) fuel cell applications for stationary appliances*  
October 2-3, Sheffield, South Yorkshire, England

Karen Hall reported that there needed to be coordination between WG 14 and WG 12. Both these WGs are developing requirements for fuel quality.

- ISO/TC 197 plenary in Beijing, China  
The next plenary will be held on December 15, 2011, at the Loong Palace Hotel & Resort Beijing. The schedule of working group meetings has not been confirmed at this time. Individuals who plan to attend this meeting must notify Jill Thompson ([jthompson@cganet.com](mailto:jthompson@cganet.com)) no later than October 24. An official letter of invitation from the meeting host also is required as most delegates will need a visa. Contact Jill Thompson for specifics on requesting this invitation letter.

### IEC TC 105

Kelvin Hecht gave an update. The Stationary Power Plants document is going through editorial review. There will be a vote near the end of the year. There is a new activity to address small stationary fuel cells. Robert Wichert would be the convener of this working group.

**NFPA- no update**

**ICC- no update**

**CSA – See Attachment**

**Others**

### 7 Open Discussion & Other Issues

Next meeting will be held on November 16<sup>th</sup> due to scheduling conflicts.