

# MINUTES OF THE JULY 2010 TELECONFERENCE OF THE NATIONAL HYDROGEN AND FUEL CELLS CODES & STANDARDS COORDINATING COMMITTEE

**MEETING DATE: July 7, 2010**

**FACILITATOR: Karen Hall, NHA**

## 1. Roll Call - Chad Blake

Robert Wichert welcomed everyone to the January teleconference meeting of the National Hydrogen and Fuel Cells Codes & Standards Coordinating Committee. The meeting was held by webinar, with call-in capability.

- [Attendees](#) (16Kb PDF)

## 2. Review of Anti-Trust Guidelines - Robert Wichert

Robert Wichert reminded USFCC members to be mindful of the Anti-trust guidelines.

- [Antitrust Guidelines](#) (27Kb PDF)

## 3. Review of/Corrections to Draft Minutes of June 2010 Teleconference Meeting

The June 2010 draft minutes were approved without change. Approved minutes are posted at [www.hydrogenandfuelcellsafety.info](http://www.hydrogenandfuelcellsafety.info).

## 4. DOE/HQ Update – Antonio Ruiz

Antonio provided an update. There was good attendance at the Annual Merit Review. Many of the members attended. Coordination between the ISO working groups and the various experts was the subject of several discussions and we expect this to be improved as a result. Global Technical Regulations for Fuel Cell Vehicles are progressing. There are good discussions going on regarding the draft being prepared for the Fall, including storage systems regulations. The next meeting is in San Francisco in September 7-10, 2010. This is an opportunity for some key people to attend since the draft is intended to be available in the Fall. September next year ICHS, International Conference on Hydrogen Safety, will be held in San Francisco. This Conference brings together approximately 300 researchers to discuss this important issue. DOE is planning a workshop in China September 27-29, 2010 on Type 4 tanks. This is an issue of concern since the global market affects everyone. September 23-24 IPHE in Shanghai.

## 5. Calendar of C&S Events and Fuel Cell Safety Information - Kelvin Hecht

Kelvin reviewed the online calendar for codes and standards that he has created. He asked for impressions, to survey if this is useful and should be continued. Consensus on the call was that this is definitely a useful resource, and that it should be kept specifically to codes and standards items. Antonio agreed that the scope for this calendar should be focused only to codes and standards dates, and that the NHA can make sure to include other events on their website. Karen noted all the events that are currently scheduled for this September, as it will be an unusually busy month for hydrogen and fuel cell codes and standards activities.

- ISO/TC 197 WG 14: September 13 and 14, 2010, in Vancouver, B.C. Canada
- NFPA 52 Pre-ROP Meeting: Sept 15-16 in Las Vegas, Nevada
- ISO/TC 197 WG 15: 15 and 16 September, 2010 ; Location : Montreal, CRIQ research facilities (postponed)
- ISO TC 197 WG 8 - on September 21, 2010. Engineering Advancement Association (ENAA) of Japan
- ISO TC 197 WG 11 - on September 22, 2010. Engineering Advancement Association (ENAA) of Japan

- NextEnergy C&S Conference – being determined now – 21 September (tentative)
- SAE Sept 14, 15 and 16 – Troy, MI

Karen reminded everyone on the call about the Safety website, and that this website contains the resources for the NHFCCSCC as well as the HIPOC and other useful links.

## 6. Updates

This is the opportunity for CDOs, SDOs, Panels, Committees, etc. to provide updates and issues to the group.

### 6.1 ISO/TC 197 - Glenn Scheffler

July 2010 Update

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

#### Ballots in progress

- **N472**, proposal to revise **ISO/TR 15916:2004**, *Basic considerations for the safety of hydrogen systems*

The tentative U.S. TAG position is to *approve* the update as a TR. The position and supporting documents are posted on the U.S. TAG's website for review by members. The ISO ballot terminates on July 19. Interested experts are encouraged to join the Working Group and the US TAG. Please contact Jill Thompson.

#### Ballots recently closed

- Systematic review of **ISO 16110-1:2007**, *Hydrogen generators using fuel processing technologies – Part 1: Safety*

The U.S. TAG voted to *confirm*. The ISO ballot terminated on June 15; results of the vote have not been circulated.

- **ISO/DIS 17268**, *Gaseous hydrogen land vehicle refueling connection devices*

The U.S. TAG voted to *disapprove*. The ISO ballot terminated on June 25; and the document was disapproved.

#### Recently published

- **ISO 26142**, *Hydrogen detection apparatus – Stationary applications*

This new International Standard was published on June 1.

#### Recent and Upcoming meetings

- *ISO/TC 197/WG 12 on hydrogen quality*  
Meeting was held June 23-25 in Paris

Hosted by Air Liquide

CO and Sulfur limits were left at the previous limits of 200 ppb (CO) and 4 ppb (Sulfur). In addition the table was simplified to remove the Type 1 / Type 2 columns and combine them. The entire Committee Draft was reviewed, word by word. The DIS is being distributed for review shortly. It should be distributed by ISO for country votes late this year.

- *ISO/TC 197/WG 8, Electrolyzers, domestic applications*  
Meetings will be held on September 21-22 in Tokyo
  
- *WG 11, Filling Stations, including separation distances*  
Meetings will be held on September 21-22 in Tokyo
  
- *ISO/TC 197/WG 15, Stationary Tanks*  
Meeting on September 15-16 in Montréal, Québec  
The issue of harmonization with ASME standards is important to consider.

## 6.2 IEC/TC 105 - Kelvin Hecht

- **WG#3 (Stationary Fuel Cells-Safety) IEC 62282-3-1 Ed. 2**
  - A second CD for the 2nd edition submitted to TC105 for national committee reviews.
  - A second CD is being sent out because the changes since the last circulation were significant enough to require another vote. Some of those changes were to reference various IEC Electrical Safety Standards as normative requirements, as applicable.
  - Korea plans to adopt the 2nd edition as a Korean standard.
- **WG#10 (Micro Fuel Cells – Fuel Cartridge Interchangeability IEC 62282-6-310)**
  - A new standard, 62282-6-310, will address:
    - Interchangeable power connector, and
    - Data communication protocol.
    - First meeting will be in October in Seattle
- **WG#11 (PEM Single Cell Tests)**
  - A new activity has been approved: incorporate FCTESTQA project to develop a test procedure for I-V (polarization) curves, which can be used for the characterization of PEM fuel cell stacks.
- New Ad Hoc study group has been established to investigate the incorporation of EN 50465 (European standard for small fuel cell used primarily for heat) into the scope of TC105
  - Robert Wichert has been selected as the convener.
  - 1st meeting will be July 5-6 in Frankfurt/Main (Germany).
  - The Study Group met July 5-6 and decided to initiate NWIP to consider development of a new single standard for small Combined Heat and Power Fuel Cells with a Peak Load Device.
- A new activity to address forklift trucks and/or APU's is under consideration.
  - The US will vigorously support forklift truck standard(s)
  - Any suggestions on the scope of forklift standard(s) is encouraged
  - UL has been contacted to receive approval to use UL 2267.

Visits during April - 8,236

Visits during May - 15,010

Visits during June - 13,094

### **6.3 Fuel Quality - Jim Ohi**

#### *TC197WG12 Draft Specifications/Paris Meeting*

Jim reported on results from this meeting. The major update coming from the meeting was that CO and sulfur were left at the previous limits of 200 ppb for CO and 4 ppb for sulfur. The DIS will be distributed for review shortly. It should then be circulated by ISO for country votes late this year.

Standardized analytical sampling methodology has been discussed. ASTM has been working on this issue. The US position is to use the ASTM procedures when they are available. Some members are resisting this, preferring instead to write their own analytical procedures. The ASTM procedure for formaldehyde will be referenced.

### **6.4 ASTM D03.14 - Jackie Button**

#### *NIST*

Juana reminded everyone on the call that the National Conference on Weights and Measures is later this month, July, 13-15 in St Paul, MN. They will be hearing on method of sale and interim equipment code, and they will vote on this for inclusion in Handbook 130 and Handbook 44. The two chairmen for these activities will be receiving any comments that are submitted on the issues, and Juana encouraged everyone on the call to provide input to encourage these efforts.

### **6.5 TC197WG14 (Hydrogen Quality for Stationary Systems) - Karen Hall**

Karen Hall provided an update. The US TAG is not in favor of another fuel specification. Local area pipeline networks have been targeted for this new standard. They are working on the type of PEM fuel cell as well as the type of feedstock. Multiple grades would be problematic. The Working Group has been asked to reconsider their work plan. The next meeting is in September. Robert Wichert is the US TAG point of contact. The Working Group includes Japanese utilities and Korean utilities. CEA in France and IRAM in Argentina are participating. NIST is also involved. DE is also involved. Toshiba. Sylvia Wessel is also a member. Convener is Osamu Tajima.

### **6.6 Fuel Cell Forklifts - Aaron Harris**

Aaron reported that the next meeting of the fuel cell forklift working group is scheduled for the 19th of July. The various standards documents are continuing to move forward, and there were no major updates at this time

### **6.7 Tank Testing - SNL**

Daniel Dedrick provided an update. 12,000 cycles on as-manufactured tanks have been achieved without failure. All intentionally flawed tanks are on-hand. Cycling at full capacity should start shortly.

Stakeholders will be assembled for a 70MPa fast-fill protocol to inform the J2601 document. He encouraged anyone with an interest to contact him.

Sandia is also going to work on NFPA2-related experiments for indoor refueling release modeling in a warehouse/forklift environment. This effort will commence in August. Indoor release modeling will consider two different release scenarios – one a small release size and the other a large PRD failure. Tom Joseph noted that info will be particularly useful, especially for DOD forklift applications.

Robert Wichert asked Daniel about Sandia's tunnel work, and if their work has been passed to the NFPA 2 tunnel task force. Daniel will follow up with Marty Gresho to ensure this is happening.

### **6.8 CSA - Josip Novkovic**

Josip provided an update regarding Senka Krsikpa who has moved to another job at another company. Josip will be picking up that responsibility.

### **6.9 SAE - Mike Steele**

The September meetings are still expected to occur. J2719 needs to be briefed in the ISO work. Safety will also most likely need to meet. CGA is updating their document to reflect the current limits and to address custody transfer. Mike Steele agreed to support this work.

## **7. Discussion**

### **NHFCCSCC Mission Statement & Meeting Format - Robert Wichert**

Robert Wichert asked the group to quickly review the previous mission statement and if there were any additions anyone thought necessary. Consensus on the call was to make two short additions in the opening paragraph – add the word 'regulations' before 'codes and standards community' and 'harmonized' before 'consensus based'. A few additional stakeholders were then added to the list in this document, and were captured in the version below.

- [Revised Mission Statement](#) (22kb PDF)

Chad noted that the meeting format for these calls will be altered. The calls will now be issue-oriented rather than update-oriented. Members are requested to contact the organizers in advance of the call with any new issues that should be added to the agenda for future calls. Members are encouraged to review the Mission Statement for changes. We will discuss this again next month.

## **8. Next Meeting: Wednesday, August 4th, 2010, 3:00 – 4:30 pm Eastern**