

# **MINUTES OF THE JULY 2009 TELECONFERENCE OF THE NATIONAL HYDROGEN AND FUEL CELLS CODES & STANDARDS COORDINATING COMMITTEE**

**MEETING DATE: July 1, 2009**

**FACILITATOR: Chad Blake**

## **1. Roll Call - Robert Wichert**

- [Participants](#) (8Kb PDF)

## **2 Review of Anti-Trust Guidelines - Karen Hall**

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

## **3. Review of/Corrections to Draft Minutes of May 2009 Teleconference Meeting**

Approved as written

## **4. DOE/HQ Update - Antonio Ruiz**

Antonio Ruiz provided an update. The House Sub-Committee considered the President's requested DOE budget and seemed to be considering adding some funding for vehicle hydrogen systems. Currently the DOE Codes & Standards budget for hydrogen systems is zero. Even if funding comes back, the current programs would need to be reevaluated to make them more aligned with the fuel cell focus versus the vehicle focus.

## **5. California Hydrogen Standards - John Mough**

No update

## **6. Hydrogen Industry Panel on Codes (HIPOC) Activities**

No update

## **7. NFPA Activities - Marty Gresho / Paul May**

Paul May provided a report on NFPA activities. There was a separation table, extracted from NFPA 55, which was not approved by the NFPA 52 Committee, but that table passed unanimously from the floor. The NFPA 52 Committee is now voting to adopt the separation table from NFPA 55 by a two-thirds vote, however the vote is not final yet.

NFPA 2 will meet in August. If you wish to attend the meeting, please contact Paul May.

A question was asked regarding underground storage. Paul will respond to this question separately. Tom Joseph clarified that underground storage is allowed, and NFPA 55 must be followed.

## **8. ICC Activities - Darren Meyers**

No report

## **9. DOE / NREL Activities - Carl Rivkin**

Carl Rivkin provided an update on Codes & Standards work in progress at DOE now. A comprehensive gap analysis is in progress. In addition, web pages are being prepared for the SIX ALTERNATIVE FUELS. Ethanol, Biodiesel, Electricity, Propane, Compressed Natural Gas, and Hydrogen. NREL has built a sensor test facility at NREL. Testing is in progress. Sensor manufacturers should contact Carl Rivkin to get

involved in the testing program.

Siting and regulatory officials workshops are now scheduled as below:

Month	Date	Location
July	17	Tampa, FL
August	TBD	San Antonio, TX
November	13	Jefferson Parish, LA

## 10. Report on IEC/TC105 Activities – Kelvin Hecht

### TC105 – Fuel Cell Technologies

#### WG#1 (Terminology)

2nd edition (glossary) to be published by the end of the year

#### WG#2 (Module)

2nd edition in CD phase with major modifications – addition of shock & vibration tests

#### WG#3 (Stationary Power System – Safety)

2nd edition, to complete CD by end of the year with Major modifications – leakage & strength tests; electrical section

#### WG#4 (Stationary Power System – Performance)

2nd edition will harmonizing with ASME PTC 50

#### WG#4 (Small Power Systems – Performance)

Kickoff meeting held in May

#### WG#5 (Stationary Power System – Installation)

2nd edition with primarily editorial changes

#### WG#7 (Portable)

2nd edition in CD phase with minor changes including a shock and vibration annex.

#### WG#8 (Micro – Safety)

FDIS published in June

#### WG#10 (Micro – Cartridge Interchangeability)

Standard published in June

#### WG#11 (Single Cell Test Method)

DTS submitted in July

[www.fuelcellstandards.com](http://www.fuelcellstandards.com) June website activity

- Visits: 5,674
- Pdf downloads: 296

## **11. Report on ISO/TC197 Activities – Glenn Scheffler / Jill Thompson**

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

#### **11.1 Vote recently closed**

ISO/CD 17268, Compressed hydrogen land vehicle fueling connection devices. The U.S. TAG voted "Disapprove" and submitted 9 comments.

#### **11.2 Meetings**

##### **WG 8, Hydrogen generators using water electrolysis process.**

Meeting date: July 2. Location: Montreal, Canada. Work item: ISO/CD 22734-2, Hydrogen generators using water electrolysis process — Part 2: Residential applications

##### **WG 11, Gaseous hydrogen – Service stations**

Meeting date: July 3. Location: Montreal, Canada. Work item: ISO/WD 20100 - Gaseous hydrogen — Fuelling station

#### **U.S. TAG Meeting**

Meeting date: August 27, 9:00 AM to 3:00 PM. Location: Chantilly, VA

#### **Plenary Meeting**

Meeting date: October 14 (WG meetings on October 12-13 - TBD). Location: Seoul, Korea. Host: Republic of Korea (KATS)

#### **WG 12, Hydrogen Quality**

WG #12 update by Jim Ohi. There was a recent meeting in Vancouver. It was well attended. At the meeting a schedule was established to enable an FDIS by the end of 2009. The intent is to meet in October in conjunction with the plenary meeting. The schedule includes a workshop in Berlin. Analysis of test results will be done. The contaminant limits table will be updated. The Working Group recommended some changes advocated by SAE to standardize the units as a gravimetric measurement of particulates. WG #11 will be asked to address particulate sizes. The next meeting is tentatively scheduled for October 15th and 16th in conjunction with the Plenary.

A question was asked about the units being used for particulate limits. The new standard is more stringent, but it is well above what has been seen in the field.

## **12. NIST Activities – Juana Williams**

### **(1) U.S. National Work Group (USNWG) for the Development of Commercial Hydrogen Measurement Standards**

The USNWG Device Standards Subcommittee and Fuel Specifications Subcommittee held a joint meeting on June 17, 2009 by teleconference/webconference. Discussions focused on retail and wholesale applications in Draft 4.1 of the NIST Hydrogen Gas Measuring Devices Code. The USNWG's goals were to determine if the latest modifications to the code represented viable options for addressing both applications.

The USNWG discussed how the draft code applies to hydrogen refueling equipment used for bulk sales. All three classification of devices represent commercial applications and as such are not exempt from NIST Handbook 44 code requirements. Part of this measurement process relies on the pressure vessel's ASME capacity certification stamp for its water volume content. From a legal metrology standpoint there needs to be some documentation on the establishment of this volume and traceability to references tables, etc., and equations used in this verification process.

The USNWG also discussed systems that use pressure differential methodology to determine the quantity of hydrogen delivered. This commercial equipment also falls under the jurisdiction of the weights and

measures authority. The USNWG promotes all methodologies that provide accurate measurements. The USNWG will examine the pressure differential methodology from a technological standpoint for it merits for use in this application. The USNWG will examine whether or not the draft code adequately addresses refueling dispensers that use this methodology to establish and display the quantity in a delivery.

**(2) Next Meeting(s)**

**(a) Upcoming August 2009 In-Person Meeting Status**

Date(s)	Location
August 11-13, 2009	NIST 100 Bureau Drive Bldg. 222/Room B263 Gaithersburg, MD 20899
August 11th 1:00 p.m. – 5:00 p.m. EDT FSS Meeting	
August 12th & 13th 8:30 a.m. – 5:00 p.m. EDT DSS Meeting	

The USNWG will work in these sessions to ready proposals for the hydrogen codes and to develop a strategy in support of their adoption by July 2010.

**(b) New July/August 2009 Teleconference/Webconference**

The USNWG agreed an additional two-hour teleconference/webconference is necessary before the upcoming August 11-13, 2009 in-person meeting to fully develop separate requirements for retail and wholesale applications. The next teleconference/webconference of the USNWG will be Tuesday, July 7, 2009, from 3:00 p.m. to 5:00 p.m. EDT.

**(3) July 2009 National Conference on Weights and Measures (NCWM) Annual Meeting**

The 94th Annual Meeting of the NCWM (<http://www.ncwm.net>) will be held July 12-16, 2009, in San Antonio, Texas. Since 1905 the NCWM is the forum whereby national weights and measures standards have been introduced, discussed, and formally recognized by the States. The Specifications and Tolerances Committee, Laws and Regulations Committee, and Meter Manufacturers Association will be updated on the status of the USNWG's work to develop legal metrology requirements for gaseous hydrogen refuelling and related applications.

**13. CSA America Activities – Julie Cairns/ Connie Bielawski**

No report

**14. SAE Activities – Mike Steele / Glenn Scheffler**

No report

**15. ASTM D.03 Activities – Jackie Button**

**15.1 ASTM D.03 Activities**

ASTM met last week. Five work items have gone to ballot. Two have passed. Ion Chromatography is nearing publication. Total hydrocarbon analysis has also passed ballot. Sampling is in sub-ballot and progressing. Test methods for sulfur are also progressing.

Standard test method for ammonia is lacking a technical lead. If anyone knows anyone who has expertise in these areas should contact Jackie. The next meetings are now scheduled for December 7, 8, 9 in California.

A question was asked if there is at least one test for each contaminant. The answer is yes, and publication is moving forward on all of them.

- [See Update](#) (51Kb PDF)

**16. Report on Draft NHA Codes & Standards Priorities for 2009-01-09 – Karen Hall / Geoff Bromaghim**

No report

**17. Report on USFCC Codes & Standards Priorities for 2009 – Sondra Ullman**

Sondra Ullman provided an update. The USFCC priorities have remained constant.

**18. Open Discussion**

None

**19. Next Meeting**

Wednesday, August 5, 2009, 3 pm EDT