

**National Hydrogen and Fuel Cell Codes and Standards Coordinating Committee  
(NHFCCSCC)**

**Wednesday, March 6, 2019  
TIME: 3:00 – 4:00 pm (Eastern Standard Time)**

**Minutes**

**Attendees**

**Anthony Belvin  
Christine Daniels  
Connor Dolan  
Eric Nelson  
Eric Prause  
Greg Chirdon  
Jennifer Hamilton**

**Juana Williams  
Justin Wu  
Karen Quackenbush  
Kevin Harris  
Laura Hill  
Morry Markowitz  
Nick Barillo**

**Norman Newhouse  
Sara Marxen  
Stella Papisavva  
Yuk Wong  
William Collins**

**I. Welcome and Housekeeping Items**

- Reviewed FCHEA's anti-trust guidelines - Available on FCHEA's members only website and a copy can be provided to you on request.
- Approved the meeting agenda.
- Approved the previous meeting minutes.

**II. DOE/HQ Update**

**Laura Hill**

Two funding opportunity announcements are out. H2@Scale FOA went out on Monday. A FOA joint fuel cell and bioenergy on medium and heavy-duty applications went out on Friday last week.

The DOE AMR will take place on April 29 through May 1. Early bird registration is closed; however, you can still register at the regular rate.

**III. C&S Events and Fuel Cell Safety Information**

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

**Karen Quackenbush**

Request: technical resource updates for the Hydrogen and Fuel Cell Safety website. Any committee members who have materials they would like hosted on the website can send them to Karen Quackenbush ([khall@fchea.org](mailto:khall@fchea.org)) or Connor Dolan ([cdolan@fchea.org](mailto:cdolan@fchea.org)).

AICHe 2019 Spring Meeting and 15th Global Congress on Process Safety will be held March 31 - April 4, 2019 in New Orleans.

**IV. Global Technical Regulations**

**Nha Nguyen**

The GTR is meeting now. We will expect a more robust report at the next meeting.

## V. Codes and Standards Organization Updates

### IEC TC 105

Kelvin Hecht

No report at this time.

### ISO/TC 197

Karen Quackenbush/ Glenn Scheffler/Jay Keller

No FDIS have been out and circulated yet. There are four currently under preparation.

### NFPA 2

Carl Rivkin

Karen Quackenbush – Ballot for second draft meeting have gone out and been returned. A few negative votes received, however, based on initial results, all balloted items seem to be on track to pass.

### ICC

Spencer Quong

No report at this time.

### CSA

Sara Marxen

A few documents in development.

- **HGV 4.3** (hydrogen fueling parameters) is an active project to develop the next edition to include MC formula based requirements. The Technical SubCommittee has completed dispositioning comments. The revisions will be incorporated into the draft and after the TSC has an opportunity to review/approve the revised draft, the document will be sent for Technical Committee ballot.
- **HGV 4.1** (dispensers) is an active project to develop the next edition. The TSC continues to meet to disposition member comments. The next meeting of the TSC is planned for March 13.
- **HGV 4.9** (stations) is an active project to develop the next edition. The disposition of member comments was completed at the February meeting and the document will soon be distributed for Public/Industry Review.
- **CHMC 2** (chemical compatibility for non-metals) is an active project to develop the first edition. The draft standard is currently out for Review.
- As part of the **CSA Annual General Meeting**, the Hydrogen Technical Committee and Technical SubCommittees will be meeting in Ottawa, Canada during the week of June 17-20<sup>th</sup>. Hydrogen activity will occur June 18-20. Additional meeting details will be circulated in the next few weeks.
- **FC 5** (Hydrogen generators) is an international adoption of ISO 16110-1. The document is still pending ANSI BSR-9 approval. Anticipate the document publishing by end of March.
- **FC 6** (fuel cell modules) is an international adoption of IEC 62282-2-100. Anticipate the document publishing by end of March.

**SAE**

**Mike Steele**

No report at this time.

**CGA**

**Rob Early**

CGA will be reviewing the draft I codes and others when they are available, will seek a report on the next call.

**ASTM**

**Jennifer Hamilton**

WK23815 NEW STANDARD 00 Standard Screening Method for Organic Halides Contained in Hydrogen or other Gaseous Fuels has been Approved as D7676-2018 and is Pending Publication. This is a screening method which references D7892-15 Standard Test Method for Determination of Total Organic Halides, Total Non-Methane Hydrocarbons, and Formaldehyde in Hydrogen Fuel by Gas Chromatography/Mass Spectrometry

The workshops being planned:

Hydrogen Fuel Sampling Workshop: J. Hamilton had submitted paperwork for the December 2019 meeting. This may be in conflict with the 2019 ISO/TC 197 Plenary; potentially preventing invited international colleagues to participate in the workshop. Committee agreed that we can move it to June 2020

**ASME**

**John Bendo**

Justin Wu – Meeting next Tuesday March 12. Hope to have an update after that meeting.

## **VI. Discussion Topics**

**Facilitating Deployment**

**Carl Rivkin**

No update at this time.

**H<sub>2</sub>USA Activities**

**Karen Quackenbush**

Working groups are meeting. There is still interest from industry on reformer reliability, which is something the Hydrogen Fueling Station WG will be working on. There is an ISO TC 197 activity on reformers that is looking for industry participation. Karen will work to get H2USA participants engaged on this standard with broader participation.

**Regulatory Matrix Review and Comment**

**Karen Quackenbush**

Latest version of the Matrix is here (updated December 31) - <http://www.hydrogenandfuelcellsafety.info/s/FCHEA-Regulatory-Matrix-Markup-Dec-31-2018.pdf>.

In addition to updates based on reports from this meeting, the NIST Handbook 44 will be added to the matrix for the next quarter.

Please review this version of the Matrix and provide any updates to Karen Quackenbush at [kquackenbush@fchea.org](mailto:kquackenbush@fchea.org).

## **Permitting and Installation of Hydrogen Fueling Stations**

### **CA Station Implementation**

**Jennifer Hamilton**

CAFCP held a quarterly station webinar recently. A new protocol is being implemented on the station map and the Station Operational Status System (SOSS), a mobile site for tracking H2 station status. A couple of stations have had some kind of in development status for extended period of time, if they are going to be offline for >6 months then they will turn red on the map and taken off SOSS. Newport Beach is one example. They are replacing the SMR and will take some time. Sacramento stations are moving along. Have a few expected to open relatively soon.

The CEC held a workshop for their draft solicitation. The CAFCP along with select members have signed onto a letter providing feedback.

### **CA DMS Fuel Quality / Metrology**

**Kevin Schnepf**

No report at this time.

### **Legal Metrology Standards Hydrogen Fuel Quality and Measurement**

**Juana Williams/Ralph Richter**

No report at this time.

## **VII. Open Discussion & Other Issues**

No items at this time.

## **VIII. Next Meeting – Wednesday April 17, 2019 at 3:00 PM Eastern**

Note that no May 2019 meeting is planned at this time.