

MINUTES OF THE OCTOBER 2009 TELECONFERENCE OF THE NATIONAL HYDROGEN AND FUEL CELLS CODES & STANDARDS COORDINATING COMMITTEE

MEETING DATE: October 7, 2009

FACILITATOR: Chad Blake, NREL

1. Roll Call - Chad Blake

- [Attendees](#) (26Kb PDF)

It was noted that it has been some time since participants were given an opportunity to indicate their continued interest in being on the roster for the monthly meetings. Chad Blake agreed to do that starting next month, so that those no longer interested in participating could be removed from the roster.

2. Review of Anti-Trust Guidelines - Tony Androsky

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

3. Review of/Corrections to Draft Minutes of September 2009 Teleconference Meeting - Chad Blake

There was one change to the draft minutes, proposed by Paul May. In item 7 – Report on NFPA activities, the word “dispositioned” is changed to “delayed”. There were no other changes, and the minutes were approved with this change.

4. DOE/HQ Update – Antonio Ruiz

Antonio was unable to participate in the call, as he was at a DOE offsite meeting determining a revised 2010 spend plan in light of the House & Senate Conference mark of \$174M for hydrogen and fuel cell technologies.

5. California Hydrogen Standards - John Mough

John reported that California may revise its regulation based on SAE/ISO work. He is aware of a discussion on whether to remove restrictions on particulates. If such changes have consensus, they can be made to the California regulations. Otherwise, there was nothing new to report. Chad agreed to remove this item from the agenda until there was something new.

6. Hydrogen Industry Panel on Codes (HIPOC) Activities - Paul May

Paul reported that HIPOC had held a telecon just prior to this call, and is preparing for the ICC hearings in Baltimore. The hydrogen proposals are most likely to be heard on October 24-26, as they pertain to the International Fire Code. HIPOC is working with other interested parties to reach agreement on the best way forward where there are multiple proposals to address the same issues. This is the case for separation distances, where HIPOC, CGA, and NASFM all have similar proposals.

7. NFPA Activities - Paul May/Marty Gresho

Paul reported that as the result of a ballot in the VAF Technical Committee, NFPA 52 will be dropping a half cycle behind NFPA 55 to make it easier for NFPA 52 to pick up pertinent changes in NFPA55.

8. ICC Activities - Darren Meyers

Darren was not on the call. Participants asked whether it is possible to get someone else to report on ICC activities if Darren is not available. Chad agreed to look into it. The ICC hearings will take place from

October 24 – November 11 in Baltimore, MD. The proposals relating to hydrogen for the International Fire Code are most likely to be heard on October 24-26.

9. DOE/NREL Activities and DOE/Sandia Activities - Carl Rivkin and Daniel Dedrick

Chad gave the update. The new lab is up and running. The codes and standards information is expected to be moved in the near future.

Dan gave an update on activities at Sandia. Work is ongoing on hydrogen releases in tunnels. Test in place with SRI to look at testing. As far as hydrogen effects and metals, work as been ongoing, focusing primarily on components. Sandia is waiting for a response from DOE on this test plan. Spontaneous ignition work is also ongoing at SRI, looking at effect of charged particles.

Jim Ohi reported on the fuel quality Berlin workshop. EC is releasing its call for it joint initiative on hydrogen and fuel cells. They are looking to spend 940 million Euros, cost shared by industry and the EC. They've formed an industry partnership to run this. They'll look at the whole range of hydrogen and fuel cell technologies, looking at both shorter and longer term ranges. They've connected GHG reductions with economic competitiveness. Jim also discussed the German H2 mobility initiative – a \$2 billion initiative over the next 10 years. An MOU was released in tandem on rolling out hydrogen infrastructure for 2015. The fuel quality workshop also provided a forum for discussion with European gas providers on metrology issues, and moving towards consensus.

At the International Conference at Hydrogen Safety, a lot more work presented on hydrogen releases in confined spaces, insurance issues, R&D gaps, and international collaboration. The conference had around 200 attendees.

10. IEC/TC105 Activities - Kelvin Hecht

Kevin reported. TC105 – no new information. But as recorded the last few months, the US TAG has been collecting comments the last few months on four documents and have to report this month on them. Comments are still welcome but needed quickly. The Fuel Cell standards website is currently on hold pending resolution of budget issues.

11. ISO/TC197 Activities - Glenn Scheffler/Jill Thompson

- [Report](#) (15Kb PDF)

In addition to the report above, the following items were discussed:

- The United States has been requested to vote on ISO/CD 20100, Gaseous hydrogen — Fuelling stations.
- Please submit your vote (and any comments using the comments template, available at http://www.cganet.com/member/document_detail.aspx?id=4548) on ISO/CD 20100 by Monday, November 30, 2009, to allow time for obtaining a consensus U.S. position before the close of voting.

12. Fuel Cell Forklift Issues - Aaron Harris

Aaron reported the Fuel Cell Forklift Task Group had a webconference on September 28th. They have identified three primary areas of importance: 1) Cycle fatigue 2) Fueling guidelines 3) More harmonized

definitions of maximum service pressures. Three key SDOs are now planning to include these issues in the next revision of their documents – CSA, UL and SAE. The next call is scheduled for October 18th.

13. NIST Activities - Juana Williams

Juana was not able to make the call, but submitted the following reports:

- [U.S. National Work Group \(USNWG\) for the Development of Commercial Hydrogen Measurement Standards](#) (13Kb PDF)
- [Proposal for New NIST Handbook 130 Laws and Regulations To Address Hydrogen Refueling Applications](#) (39Kb PDF)
- [USNWG Proposal Update –New NIST Handbook 44 Section 3.39 Hydrogen Gas-Measuring Devices Code](#) (103Kb PDF)

14. CSA America Activities - Julie Cairns/Connie Bielawski

Julie provided an update on the CSA activities, and submitted a report for the minutes:

- [Report](#) (41Kb PDF)

Doug Horne asked if UL is working on listing requirements for fork lifts. Laurie Florence responded affirmatively.

15. SAE Activities - Mike Steele

Mike reported the schedule of SAE meetings for November 9-11, with the Safety Working Group to meet all three days, the Interface Group to meet on the 10th, and J2719 to be addressed on the 11th.

16. ASTM D.03 Activities - Jackie Button

Jackie reported on the call. Only update from the attached is on work item 23815 – went to sub-ballot last week.

- [Report](#) (12Kb PDF)

17. NHA Activities - Karen Hall

Karen Hall announced the NHA has been invited to present a Short Course at the 2009 Fuel Cell Seminar in November. The Short Course would be held on November 16th, and the Fuel Cell Seminar will be held on November 17-19 in Palm Springs, CA. As the format we of choosing 1-2 key topics and having time for active discussion has been working so well, the NHA plans to use this format for the short course, and asked participants if they could offer any hot topics. Specifically, would the timing be right to address the codes and standards needs for forklift trucks and their associated refueling? Jesse Schneider - the Chair of SAE J2601, has asked the NHA to help disseminate information about J2601, which is due to be published this month. This is the document that will be revised to include fuel cell forklifts in the next edition. If the timing is right for SAE, the Short Course provides an opportunity for those interested in this issue to better understand J2601 and to learn about the plans for the revision in time to get involved. The NHA is coordinating with Jesse now, and would welcome other views on whether this is the right time to have an in-

depth discussion about the activities of SAE, UL, and CSA to address forklift applications. This would be the first opportunity we've had since the Forklift task force was created to engage other interested parties in person.

There was some discussion, generally indicating this would be a useful topic. Karen asked anyone with additional thoughts to contact her in the next couple of days so that the NHA and USFCC could work out the agenda.

18. USFCC Activities - Sondra Ullman

Sondra noted that the USFCC has recently updated their C&S Priority matrix, and would share this for the minutes. Overall, the priorities are the same, although forklift applications and cargo shipment of fuel cells have moved up the ranking while it is noted that some other items that are a high priority are now deemed to have the appropriate level of effort applied.

Robert Wichert also sent e-mail updates from the ICAO meetings for the minutes:

MONDAY, OCTOBER 5

Working Paper WP/50

Our paper on consequential changes to UN 3166, WP/50, was reviewed in conjunction with the Secretary's paper on harmonization with changes to the UN Model Regulations, WP/6. The two papers involved are here:

<http://www.icao.int/anb/FLS/DangerousGoods/DGP/DGP22/WPs/DGP.22.WP.050.2.en.pdf>

<http://www.icao.int/anb/FLS/DangerousGoods/DGP/s DGP22/WPs/DGP.22.WP.006.2.en.pdf>

The outcome of the discussion was to approve the majority of our paper, but to ask for changes to the proposed Special Provisions A21 and corrections to the Glossary Definition for FUEL CELL. Following the formal meeting, a small group of interested Panel members discussed the issue in detail and came up with a revised approach. I believe that this maintains the intent of our proposal, but it will be up to the Panel to decide the final outcome. A revision to the FUEL CELL definition was routed to the representatives of The Kingdom of the Netherlands and IATA for their review and concurrence. These may be discussed today or later in the meetings this week or next week.

TUESDAY, OCTOBER 6

Working Paper WP/47

<http://www.icao.int/anb/FLS/DangerousGoods/DGP/DGP22/WPs/DGP.22.WP.047.2.en.pdf>

Our paper with our explanation of how the term "conveyances" relates to the fact that ISO 16111 does not apply to "vehicles" (linked above) was rejected. However a new definition of "conveyance" was developed by the Head of Delegation from The Kingdom of The Netherlands. I prepared a proposal for adding this definition. This definition will be considered today or later in the meetings this week or next week.

Working Paper WP/51

<http://www.icao.int/anb/FLS/DangerousGoods/DGP/DGP22/WPs/DGP.22.WP.051.2.en.pdf>

Our paper requesting that purged, flushed and back-filled engines be granted the same unregulated status as new engines linked above was discussed at length. Comments were made during the discussion that provided guidance regarding similar handling of similar situations in Packing Instructions PI 902 and PI 904. I reviewed those Packing Instructions and prepared a draft that takes those comments into account. This draft is still being reviewed by the US, IATA and The Kingdom of the Netherlands.

Our next paper to be discussed is expected to be our Limited Quantities paper, WP/48. This might be discussed later today or tomorrow. The link to that paper is below.

<http://www.icao.int/anb/FLS/DangerousGoods/DGP/DGP22/WPs/DGP.22.WP.048.2.en.pdf>

It is expected that our papers on Checked Baggage, Guidance for Fuel Cells and the IATA paper will be discussed next week, but there is never any guarantee of when papers will be discussed.

WEDNESDAY, OCTOBER 7

Working Paper WP/48

Our Limited Quantity paper <http://www.icao.int/anb/FLS/DangerousGoods/DGP/DGP22/WPs/DGP.22.WP.048.2.en.pdf> passed with a few editorial changes, but with all of our proposed quantities for all cartridge types.

19. Open Discussion & Other Issues

In-person meeting in November

The group discussed whether there is interest in holding an in-person meeting in conjunction with the Fuel Cell Seminar in November. It was generally agreed that in-person meetings are most successful when there are key issues to discuss in detail. The two key issues the NHFCCSCC is facing currently are the forklift activities and the DOE C&S budget. The forklift issue will be discussed in detail during the Short-Course on Monday. Russ Hewett asked if perhaps this topical interest could be to hold a review on program direction for the DOE Codes and Standards program in 2010 and beyond. Jim Ohi agreed to discuss with Antonio the possibility of using the opportunity to discuss the DOE C&S budget, plans and priorities for FY 2010, as well as the link to the GAP analysis. If Antonio agrees, this could present a reason to get together for an in-person meeting. The event would be arranged by the USFCC and those who could not attend in person would be able to participate through a web-based meeting or telecon.

20. Next Call – December 4th

If there is no in-person meeting arranged, the next telecon would take place on Wednesday November 4.