



Codes and Standards Steering Committee Teleconference
Friday, June 23, 2006 8:30-9:30 AM EDT

Steering Committee Participants:

Addison Bain
Bob Boyd, BOC
Bill Collins, UTC Power
Rob Early, Praxair
Tom Joseph, Air Products and Chemicals
Larry Moulthrop, Proton Energy
Christine Sloane, General Motors

NHA Staff

Karen Hall
Rex Hazelton
Patrick Serfass

Mrs. Hall called the roll, then opened the meeting at 8:35 AM, starting discussions with the CSA personal certification

Dr. Bain stated that RABQSA had the approach of certification for hydrogen specialists, which concerned many in the hydrogen industry, including this Steering Committee. It could be implied that hydrogen is more dangerous than natural gas, for example, which did not have certification. He stated CSA had a different approach, which is an offer to educate and orient all those in hydrogen activity, from responders to on-site management.

Mr. Collins and Mr. Joseph stated their companies were against any certification, and said 23 acting companies in hydrogen industry stated the same. CSA was meeting with Air Products the following week, and Mr. Joseph said he would provide further insights from that meeting ACTION ITEM

Concerns were expressed that some people seem to be positioning to become “gatekeepers,” getting money by forcing certifications. This could result in a scenario where only attendants would be able to pump gas, not all people. A key outcome of this part of the discussion was that the Steering Committee is in favor of any *education* programs, but is against *training* at this time.

Mr. Serfass said that he met with CSA at the 2006 Annual Conference and expressed these same thoughts.

Mr. Boyd also noted the differing attitude towards Codes and Standards between Canada and the U.S. There is a concern that certification may become mandatory.

Dr. Sloane stated that there are two groups involved, the building vs. the consulting communities, but the CSA membership has both, so they will have internal conflict.

Comment [MSOffice1]: Rex, I would include this in your summary.

Dr. Bain stated that he and Mr. Joseph would express these concerns to CSA; but they would have to be careful as Air Products and BOC had both offered training programs in the past, and you cannot expect them to give training for free.

Mr. Serfass stated that if CSA wanted to do an outreach or education program, the NHA can speak with them about holding a training event at next year's Annual Conference.

Mr. Boyd expressed concern that CSA proposed training which might imply that a training course could make you a hydrogen expert, which is untrue.

Mr. Collins offered to write a letter as UTC was involved with Doug Rhode's effort with RABQSA.

Comment [KH2]: I am not sure what a "Coiner Letter is".

Mr. Joseph asked why CSA was proposing standards for hydrogen fueling stations; why a standard for hydrogen stations is needed, but not other types of stations. SAE had been supporting requirements for stations with their work with onboard storage of compressed hydrogen. Certain assumptions were made for storage so that a fueling station will not provide too much pressure, such as mandatory safety valves, concrete pads to ground the cars, etc.

Mr. Collins felt that CSA should be focusing on product standards; they can write the box, but citing should be left to NFPA and ICC – citing that already exists in model codes. Mr Joseph furthered this, saying that CSA needed to study past efforts and utilize available resources.

At 9:03 AM, Ms. Hall moved discussion towards the DOT Gap Analysis, which Dr. Bain helped to write, as a member of the advisory panel. She emphasized the importance of this issue because it could affect future C&S regulations. Dr. Sloane asked the committee how hydrogen products would be affected based on having or not having safety regulations set in place. While the committee may not agree with the analysis or recommendations, we are trying to independently discuss current products and see what areas may negatively effect these products; this Gap Analysis is not about transportation at all, only infrastructure.

Dr. Bain agreed, saying DOT has a responsibility for infrastructure, and this analysis is to identify specific gaps where requirements are needed but do not yet exist. The NHA could assist this process.

Mr. Collins stated the material-based information falls in line with ASME. In section 1.1 they want to create an incident database for hydrogen, but not for natural gas. This makes hydrogen look more dangerous.

Dr. Sloane stated that coming from the auto industry, using gasoline is a good frame of reference. People forget how many issues there are with gasoline, but if a natural gas house blows up, it's on the front page.

Mr. Collins further spoke on natural gas issues, such as with thousands of miles of pipeline, odorants are the only way to detect a leak at this point. Mr. Joseph replied that there are thousands of miles of hydrogen pipeline already as well.

Dr. Sloane said that the report identifies odorants as a requirement. If hydrogen industry thinks the CFR should include other options, the requirements should be the same, if not safer.

Mr. Joseph suggested that the committee needed to look at DOT's role in the three areas [what three areas?], which is communicating transportation issues to those areas. The Gap Analysis report indicates DOT has a problem with underground storage; in 2.21 they say they don't understand the design and publications details. This group can go through the report and identify how to bring the three areas [which 3??] together; this was agreed upon by the group. He continued, saying NASFM has more responsibility than just being responders. With the help of DOT, NASFM has submitted a proposal to hold liquid hydrogen outside, which is the most dangerous method.

Comment [KH3]: I could not understand what this sentence meant.

Comment [KH4]: These are the kinds of comments that not meant for attribution or publishing – just a comment to the group.

Ms. Hall stated that this committee needs to tell DOT our priorities, including where we might have alternative recommendations to those published in the report.

Dr. Sloane turned to the ranking system and asked if the committee thinks they have their priorities right, which are divided into 0-5 years, and 5-15 years. She felt that the 5-15 year group should be a lower priority right now, as government may change their minds about these priorities over time, based on the developing standards, so 0-5 years should be our focus.

Ms. Hall agreed, but said that input is needed on what products are going to be available, so that they know anything on the verge of commercialization so that they do not hinder products by a lack of codes and standards.

Mr. Collins stated that the storage results and container specifications, both for mobile and stationary are not complete, but regulations need to be put in place anyway. He added that pipeline issues are farther off in the future.

Mrs. Hall explained that having a wide range of industry provides the advantage of having varying priorities in the document. She asked if there would be a benefit to have each person provide the top few concerns in the document, then assembled them all and distribute them, and then engage further discussion.

Mr. Meyers asked when the collection should occur, and suggested to meet in person at the ICC hearings in Lake Buena Vista, Florida to further discuss priorities.

Mrs. Hall suggested that the Steering Committee could provide input about the analysis for the next meeting of the Steering Committee (July 18), so that staff could draft a report following the July 18 telecon, to be in a position to discuss the report with DOT in

Florida. She noted that NHA staff would be happy to facilitate with anyone needing help. ACTION ITEM

Dr. Sloane noted another issue is that vehicles with compressed hydrogen do not have storage tanks with an infinite life, there needs to be more attention paid to the finiteness of their life. A working plan would be that a storage unit cannot be transferred without proper qualifications, but these do not exist. This is a gap because it is a law that would be adhered to, but does not exist.

Mr. Joseph also added that DOT is lacking in having an after-sales market for natural gas and hydrogen, as there are no regulations in place. Dr. Sloane commented that this comment is not a critique on existing regulations; it's a gap because no attention was paid at all to the issue.

Mrs. Hall explained that the committee needs to note if recommendations are being made, or if we are stating that an issue has been completely missed.

Mr. Joseph said that he and Mr. Collins would go through the distribution recommendations for the next meeting. ACTION ITEM

Dr. Sloane asked that oil companies also be involved.

Mr. Joseph replied that for on-board systems, Air Products looks to SAE. Dr. Sloane stated that the odorization of gas issue is more for groups dealing with dispensing.

Mrs. Hall closed the meeting saying that she would collect all comments and draft a letter to DOT, with the goal of having everything ready to discuss by the next in person meeting in Lake Buena Vista, FL in mid-to-late September. She then reminded everyone to please go through the report and submit priorities, and said she would compile this information. ACTION ITEM