SFPE Standards-Making Committee on Design Fire Scenarios

Meeting Report – July 21, 2016

Present: Charles Fleischmann (Chair), Dorota Brzezińska, Jason Floyd, M.C. Hui, Jason Smart, Piotr Tofilo, Julie Bryant (Staff) and Chris Jelenewicz (Staff).

Apologies: Kees Booth, Craig Hofmeister, Collen Wade and Shaun Wrightson,

1. **Progress from Poland Conference** – The Chair gave a presentation at the SFPE Performance-Based Design Conference in Warsaw. It was basically a progress report for this Committee. The feedback from this presentation was generally positive. As a result of this presentation, Dorota Brzezińska volunteered to sit on this committee. The only negative feedback was related to the time it will take to complete this document. As such, at some point, the Committee will need to have a discussion on how far the document should go.

2. **Scenario Summary Tables** – A new summary table that listed all of the proposed scenarios for each of the occupancy groups was presented. Areas that met the Committee's criteria for a scenario were marked in yellow. Several new occupancy groups were added. The Chair will assign these new occupancy groups to one of the sub-groups. He will also set up a drop-box account and post the associated spreadsheets. Each sub-group was asked to review the data on the new summary table against the data on the spreadsheets. The sub-group leaders will report back on discrepancies at the next Committee meeting.

3. **Additional Data from NFPA** – The Committee has already received 1st item ignited data by room of origin from NFPA for Hotels/Motels. The Chair has asked NFPA to get this data for the other occupancies. At this time, we are not sure when and how much data we will get from NFPA.

   It was noted that NFPA may not be able to get all of the data that is needed. At the same time, NFPA may not have all the data that is needed. The Committee will explore obtaining NFIRS Data from the US Fire Administration. CJ will investigate.

4. **Way Forward –** After committee receives the first item ignited data, it will try to obtain fire test data for each of these items. It will use expert judgement to develop design fire growth rate distributions based on item first ignited data. It will use @risk software to carry out a Monte Carlo simulation to create histograms and cumulative distribution functions for fire growth rates for each occupancy and room of origin.

   It was indicated that the US NRC has data based on experiments and judgement. Jason Floyd will to send these NRC reports to the Committee.

It was also noted that the NFPA does not have a specific category for assembly occupancies. But they do offer specific types of assembly categories such as churches at a sub-group level. As such, there may be fire scenarios that are needed for this document that are not reported by NFPA. The Committee will compile a list of occupancies that will be needed for this document and determine if anything is missing from the data that NFPA can offer.

5. **Tasks for Next Meeting –** Before the next meeting, the Committee will do the following:

   a. Confirm the table of scenarios – work will be divided by working groups
   b. Provide a list of occupancies the Committee will target from NFIRS data (if needed)
   c. Determine the number of room of origins that data will be needed?
   d. Divide list of first item ignited by group and start on design scenarios and fire growth distributions for the easiest ones.

   Charlie will meet with Jason Floyd next week to determine how the workload will be divided by working groups.

6. **Next meeting --** The next meeting will be scheduled for September. CJ will schedule via Doodle Poll.

- **End of Report –**