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Outline of Issues May 14, 2025

During the last videoconference with the applicant their position was they wanted to include missing submittals, the separate FPE analysis of the Large-Scale Fire Test report and data rewuired by the 2023 NFPA 855:

> **9.1.5.2* Test Reports.**
>
> **9.1.5.2.1**
> The complete test report and its supporting data shall be provided to the AHJ for review and approval.
>
> **9.1.5.2.2**
> The test report shall be accompanied by a supplemental report prepared by a registered design professional with expertise in fire protection engineering that provides interpretation of the test data in relation to the installation requirements for the ESS.

And the design of the NFPA Combustible Concentartion Reduction System into the HMA.

Our response was you can do that, but that requires etensive additions to the HMA. No further submittals occurred after that conversation.

Key issues:

The TUV NFPA 69 Report

NFPA 69 is a design standard, not a listing standard, a Texas licensed registered design professional (FPE) must be responsible for preparing the submitted design of the NFPA 69 system, not a NRTL located in China.

> **2024 NFPA 69**
>
> **1.1 Scope.**
> This standard applies to the design, installation, operation, maintenance, and testing of systems for the prevention of explosions by means of the following methods:
>
> …
> (2) Control of combustible concentration
> …

These were our initial review comments on the TUV report:

> **Appendix D NFPA 69 Report**: The document from TUV is not acceptable for the following reasons:
>
> 1. It was not prepared by or under seal and signature from the FPE of record for the project.
> 2. It does not comply with all requirements from NFPA 69. (Only refers to a single chapter)
> 3. It relies on the UL 9540A Module level test, a test that is inadequate for identifying potential severity of an event.
> 4. It models only 5 cells from a 26 cell submodule.
> 5. It incorrectly states that propagation does not occur module to module.
> 6 It doesn't provide any information on what CFD model was used.

7. It does not include any limitation information on the application of the CFD model.
8. CFD models assume box shapes, squares and rectangles. The inside of the BESS is more complicated with numerous channels for gas dispersion, the CFD submittal is required to explain how that issue is overcome.
9. For references the CSA Cell Level Report is referred to as well as the TUV Module and Unit Level Reports, however, as identified above, the TUV reports refer to a UL Cell Level Report.

Coffman Engineering added a small amount of information to the HMA, we informed them at the last videoconference that it needed much more, for example, it was identified that TUV only provided minimal comments on Chapter 8 of NFPA 69, there are requirements in Chapters 4, 6, 8, and 15 that need to be specifically address. Coffman Engineer only address a total of 6 sections from those 4 chapters.

For example, NFPA 69 requires the following:

> **6.4 Plans.**
> **6.4.1**
> Plans, system specifications, and manufacturer's recommendations for testing and maintenance shall contain information that enables the authority having jurisdiction to evaluate the explosion hazard and the effectiveness of the system.

We don't have plans specific to the NFPA 69 system, we have an invalid TUV report, we have minimal coverage in the HMA, we have the gas detecors tied in with the fire alarm plans, but none for the NFPA 69 system as a whole.

It was identifed that the TUV did not include any information on the CFD modeling, a neccessity for review. Coffman Engineering has not supplied that.

Coffman Engineering did add some language addressing the Large-Scale Fire Test, but it is minimal.

NONE of the requested submissions is proprietary.

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