Statewide Fire Prevention Code (SFPC) Sub Workgroup Meeting Summary April 18, 2022 9:00 a.m. – 2:45 p.m.

Virtual Meeting: https://vadhcd.adobeconnect.com/va2021cdc/

ATTENDEES:

VA Department of Housing and Community Development (DHCD) Staff:

Cindy Davis: Deputy Director, Building and Fire Regulations (BFR)

Jeanette Campbell: Administrative Assistant, BFR

Jeff Brown: State Building Codes Office Director, State Building Codes Office (SBCO) **Richard Potts:** Code Development and Technical Support Administrator, SBCO

Florin Moldovan: Code and Regulation Specialist, SBCO
Paul Messplay: Code and Regulation Specialist, SBCO
Thomas King: Code and Regulation Specialist, SBCO

Sub Workgroup Members:

Andrew Milliken: Virginia Fire Services Board (VFSB), Chairman of Fire Codes and Standards Committee

Dustin Wakefield: Virginia Department of General Services (DGS), Division of Engineering and Buildings (DEB)

Jimmy Moss: Virginia Building and Code Officials Association (VBCOA)

Joshua (Jay) Davis: State Fire Marshal's Office, Virginia Department of Fire Programs (VDFP)

Linda Hale: Virginia Fire Prevention Association (VFPA)

Steve Shapiro: Apartment and Office Building Association (AOBA)

Other Interested Parties:

Kenney Payne: American Institute of Architects (AIA)

Ron Clements: Chesterfield Building Official, member of VBCOA

Scott Lang: Honeywell Fire

Sean Farrell: Prince William County, member of VBCOA, member of BHCD

Sub Workgroup Members Not in Attendance:

Mike O'Connor: Virginia Petroleum and Convenience Marketers Association (VPCMA)

Lou Wolf: SBW Architects, American Institute of Architects (AIA), Virginia Chapter

Matthew Lannon: Virginia Restaurant, Lodging & Travel Association (VRLTA)

Jodi Roth: Virginia Retail Federation (VRF)

Welcome:

<u>Jeff Brown:</u> Welcomed members to the meeting and let them know that DHCD staff could assist with any questions. Anyone can join in the discussion, but only Sub-Workgroup members will vote on the proposals.

Steve Shapiro: Asked if proposal EB1209 could be moved up on the agenda because he has to leave early.

Jeff: Asked Andrew Milliken if that was acceptable.

Andrew Milliken: Doesn't mind presenting first. All three of his proposals are related.

Jeff: All three of Andrew's proposals will be presented first.

Proposals:

FP3303.3.1-21

<u>Andrew:</u> The first proposal corrects a reference to IFC 112.3 and changes it to 111. Next, a reference to IFC section 110 is stricken, and says instead that the fire official may request a stop work order from building official. Next is a change of language to indicate maintenance instead of construction. Other references were cleaned up related to the Fuel Gas Code, standpipes, stairways and removing construction provisions.

Ron Clements: Thinks that separation between construction areas does not need to specifically mention Type I and Type II construction, since noncombustible materials was stricken. In section 3314.1, the current requirement triggers a standpipe at 40 feet. That was changed to "Where required by the applicable building code, a temporary or permanent standpipe shall be maintained..." This removed exceeding 40 feet as trigger. What is the trigger now?

Andrew: Construction language referencing 40 feet was removed. That remains in the building code.

Ron: He understands and agrees.

<u>Andrew</u>: For Ron's first comment, does he suggest striking the Type I and II construction or adding back the noncombustible materials?

Ron: Does it matter?

<u>Andrew:</u> He thinks Type I and II construction provides context and doesn't think the intent is to deal with separations in Types III, IV, and V construction.

Ron: He understands and is fine with leaving it.

<u>Kenney Payne:</u> Does 3305.8.7.6 setup .9? Does .8 talk about separation between other construction types, or does this stand on its own?

<u>Andrew:</u> This stands alone for Type I and Type II construction. The idea is to remove construction language from the SFPC and keep it in the VCC. Does he see something else in IFC?

Kenney: No, he was just wondering if there's a separate section for each type.

Jeff: Confirmed that 3305.9 is a new section, unique to Type I and Type II.

Andrew: Thinks it does provide context.

<u>Jeff:</u> Hearing no other discussion, this proposal will be marked as supported by the Sub-Workgroup. Does the Sub-Workgroup want to be a co-proponent? Since there was no opposition, this will add the SFPC Sub-Workgroup as a co-proponent.

<u>NOTE:</u> After all 3 of Andrew's proposals were reviewed, it was decided by the group that **FP3303.3.1-21**, **B3302.4-21** and **EB1209.1-21** would all be Carried Over until the next meeting.

<u>Subsequent Decision:</u> At the end of the meeting, it was decided that Andrew would work on the language and submit the final proposals in cdpVA before May 1 for the June Workgroup meeting.

B3302.4-21

<u>Andrew:</u> This proposal adds two sections to the VCC, revises a section for an inaccurate reference and deletes another section, which belongs in the SFPC. The first part is separation of construction areas. The IFC reference is removed from the SFPC, but it should be added to the VCC. Section 3302.4 is for Type I Type II construction and section 3302.5 is for Type IV construction. In section 3312.1, the only change is the reference for

temporary occupancy information. The last one is a large deletion, which belongs in the SFPC. The 2021 editions of the IFC and the IBC have a number of requirements for water supply for fire protection during construction. These requirements should be kept in the SFPC and deleted from the VCC, with a reference to the SFPC located here in the VCC instead.

<u>Kenney:</u> For sections 3302.3.4 and 3302.3.5, since they are located in the IBC or the VCC, would this extend to existing buildings? For example, if a Type I or Type II building is converting to a media center, would all of this be required?

<u>Andrew:</u> Not unless it's subject to Chapter 33 in the VCC. The VEBC has its own section for buildings under construction.

<u>Kenney:</u> If you make these changes in the VCC, do you also intend to make these changes in the VEBC? Andrew: Just for the water supply requirements.

Kenney: When you say water, what requirements are being added? What if there's no water.

Andrew: That's a section for the next proposal in the VEBC.

Jeff: Section 3302.4 comes from Chapter 33 of the 2021 IFC?

Andrew: Yes, they should be emphasized in the VCC since they are being deleted from the SFPC.

<u>Jeff:</u> Section 3302.3 of the VCC says that fire safety during construction shall be provided according to Chapter 33 of the IFC. There does seem to be a link available.

Andrew: Agrees that there's a link. Yet, emphasizing that is easier if it's an actual section in the VCC.

<u>Ron:</u> Section 1201.5 in the VEBC references the IBC and IFC. There's a link to the existing building code here. If this provision is specific to work under construction, doesn't this really belong in the VEBC? There's a link, but when would you be in the VCC in an occupied building?

Andrew: Is the proposal to add language from 3302.4 to the VEBC?

Ron: Yes. It should probably be in the VEBC first.

Andrew: Is not opposed to that.

<u>Ron:</u> Over the last few cycles, they have tried to get things from the VCC into the VEBC where applicable. This is a friendly suggestion, not opposition.

<u>Jeff:</u> Asked Andrew if he wanted to table this to have more discussion about consistency in the codes before moving forward.

Andrew: Yes, that makes sense.

<u>Kenney:</u> Is in favor of carrying it over. The concern is occupied portions of a building. If the intent is adding a separate section to an occupied building, that's ok, since a lot of the existing building code is altering spaces in the existing buildings. However, a lot of Type I and Type II construction, doesn't have any separation. For example, converting classrooms in a building to a media center; would this require ripping out the ceiling and building walls up to the roof deck with noncombustible materials? The charging statement doesn't distinguish between a building and an existing space within a building. That's something to think about before it's carried over to next meeting.

<u>Ron:</u> It is fairly common for contractors to separate occupied and non-occupied space, but it's not done with noncombustible material.

Jeff: This will be marked as Carried Over.

EB1209.1-21

<u>Andrew:</u> Instead of having an open requirement for water supply, it would point to the SFPC, which regulates water supply for fire protection. This gets into vertical construction with a standpipe system. There needs to be water available. It uses the same language as the VCC.

<u>Steve:</u> This talks about standpipe systems in buildings under construction. Why would buildings under construction be in the VEBC instead of the VCC?

<u>Andrew:</u> This is existing language in section 1209.1, which speaks to water supplies for fire protection. It's an attempt to have consistent language across the codes. He can't speak to why it would or should be in the VEBC, but it already is.

Steve: Asked about pulling out the phrase "buildings under construction".

<u>Andrew:</u> That's what we're talking about, specifically buildings under construction. Chapter 12 of the VEBC speaks to that.

<u>Kenney:</u> Last code cycle, language was developed about what an addition is. It's construction without a fire wall. If it has a fire wall, it would need to be under the VCC. With no fire wall, it's only an addition to an existing building. Perhaps using the word "addition" would capture what Andrew is trying to say.

<u>Jeff:</u> They should try to decide if this language is clear enough. "Under construction" doesn't sound like it falls under the VEBC.

<u>Steve:</u> Thinks Kenney is on the right track. The language currently sounds like a building that would be covered under the VCC.

<u>Andrew:</u> In Chapter 12 of the VEBC, there are provisions for standpipe systems, means of egress, demolition, sprinklers, fire extinguishers and other safeguards that are related to construction. Water supply is just one of the things in that section. He's not understanding what the suggestion is for this, since the whole chapter has construction related language.

<u>Kenney:</u> Doesn't want to delete the whole section. He wanted to address Steve's concern, and substitute the word "building" with the word "addition".

<u>Jeff:</u> Could there ever be a case where someone is adding standpipes to an existing building? Kenney: Yes.

<u>Jeff:</u> Is it ok to say "buildings under construction" is limited to new buildings in the VCC, but describes existing buildings in the VEBC, addition of a fire wall alterations, renovations, etc.

<u>Ron:</u> Suggested using language similar to what is in section 1201.3, where it talks about requirements that shall be maintained at all times "during alterations repairs or additions". Using that phrasing instead of "buildings under construction" should make the point, and also be consistent with other sections.

<u>Jeff:</u> Asked Andrew what he thought about that, and if he wanted to carry this over until the next meeting. He also noted that Steve gave a thumbs up sign.

Andrew: Yes, that sounds good.

Jeff: This will be marked as Carried Over until the next meeting.

EB1102-21

<u>Jeff:</u> Scott wanted to bring his energy storage systems proposal to this group to get additional insight before he submits the final version.

<u>Scott Lang</u>: This proposal is an effort to bring in a change that's coming to the 2024 IFC related to existing energy storage systems. Some incidents that have happened recently has led to the idea that the older systems need to be looked at with an eye toward the latest standards of care. This would require that the owners of these older commercial systems complete a Failure Modes and Effects Analysis (FMEA) or a Hazard Mitigation Analysis (HMA). This does not cover residential systems. There's an exception for detached one-and two-family dwellings and townhouses. The 2018 IFC was the year that a lot of changes were made to energy storage systems. Before that, there was only requirements for battery backup. It will be Chapter 11 in the 2024 IFC. He's not exactly sure where to put this. Or, if there's a better way to word it.

<u>Kenney:</u> What are the potential mitigation requirements? Also, since Virginia is very clear about not requiring existing buildings meeting a current code, unless there's a retrofit, how would it even be enforced? Would the Board or General Assembly give the ok? What if later requirements are more stringent? Would they have to do this again? Personally, he agrees with this, but he doesn't know how it will land.

<u>Jeff:</u> If this goes forward, the Board will be made aware of it, but the Board cannot approve retrofit provisions in the building code. Retrofit provisions come as a directive from the General Assembly and they tie back to legislation. Also, retrofit provisions require a one-time upgrade by a certain date.

<u>Steve:</u> When this came up in the resiliency meeting, the retroactive nature of this was discussed. For that reason, he would be against this for AOBA and VAMA.

<u>Ron</u>: Doesn't see this as a retrofit. Other retrofits require something to be done to the building. This proposal doesn't say that. It requires that information to be given to the fire official. It makes more sense to put it into Chapter 12 of the Statewide Fire Prevention Code.

<u>Jeff:</u> Asked Scott to discuss the corrective action plan in 1102.1.2 to mitigate hazards, including if it would require the fire official to approve the plans and inspect after the corrective actions have been taken.

Scott: Yes, that would be the intent. Once the system is looked at and a hazard mitigation analysis is done, if things don't meet current standards of care, mitigations would be put in place that would then be inspected and approved. These are complex systems which could consist of anything. In UL9540 and 9540A, things identified include the types of gasses that are produced, thermal runaway, gas protection systems, fire protection systems, spacing that is required, etc. This is not intended to be updated every year. The codes and standards are pretty evolved now. Currently, the first edition of NFPA 855 is being used, but there were many things we didn't know when developing it. The second edition is coming out this year. Those standards have evolved quite a bit. He doesn't see that kind of change happening in the future. This has been an area over the last 5 years or so which has exploded. They want to make sure the older systems are safe.

<u>Jeff:</u> This is in the VEBC, enforced by the building official. The corrective action plan is to be submitted to the fire official under the SFPC. If there's a plan that needs construction or installation to be done under the USBC, that goes back to the building official. As this proposal stands now, it seems like there would only need to be a plan submitted to fire code official with no other action.

<u>Kenney:</u> The code change only asks for a plan, not actual work. However, the intent is that there would be mitigation performed, not just a plan submitted. He would suggest that it goes into chapter 4 of the IFC or the SFPC. Section 407 is about hazard communication and hazardous materials management plans. Could this be part of that section? As Scott said, people are installing these things. There could be existing buildings that already have a permit for storage systems. Is this intended to apply to existing buildings that already have the systems, or to buildings that don't have systems, but want to add them?

<u>Scott:</u> The intent is that when there's an existing energy storage system which doesn't meet the UL9540 or fire code standards, they should be looked at and addressed. This isn't really storage of batteries. It's more about electrical energy storage systems that are used to provide power. Storage of batteries themselves are not the main concern. The way to think of this is that it might not be in the right section, but the question is are we concerned about existing energy storage systems in Virginia. If it is about electrical energy storage systems that are used to provide power, what would the solution be?

Jeff: The group is about to discuss a very big proposal to section 1207 of the SFPC. This group made some agreements, but it still needed work. DHCD staff started from the beginning of SFPC 1207 and realized that any ESS system should be approved by the building official for installation or other upgrades under the USBC. SFPC section 1207 is all maintenance language. After an ESS system is deployed, and already approved as per the USBC, all maintenance falls under the SFPC section 1207. If Scott's proposal can be coordinated with this proposal, it would help to decide where Scott's proposal would go. A hazard mitigation analysis should be done before deployment, so the building official would approve it. Corrective action plans in existing systems should also go to the building official for approval, based on what is being proposed in SFPC 1207. He asked Scott if he would like to carry over his proposal and look at it again in the next meeting. He noted that Scott's proposal is already submitted in cdpVA, so it will be presented at the June Workgroup meeting. He said that DHCD staff would be happy to help him if he wanted to make changes in cdpVA before May 1st.

<u>Scott:</u> Does think that it should be coordinated, so he thinks it's ok to carry it over. He also noted that a main reason for this proposal is to get the discussion started, since it is on deck to be in the 2024 IFC.

{BREAK: 10:05-10:15}

Amendments to SFPC Section 1207

<u>Jeff:</u> At the previous meeting, the group reviewed a list of changes to the SFPC, proposed by the VFSB Sub-Committee, including several changes throughout SFPC Section 1207; however, the group decided that some additional work was still needed on Section 1207. DHCD staff agreed to go through the proposed changes to Section 1207 and make some additional edits to remove references to the IFC and address potential confusion related to mobile ESS. This proposal is the draft that DHCD developed.

In an Excel spreadsheet shared on-screen in the Adobe Connect meeting room, Column A showed the 2021 SFPC Base Document text. Column B showed the 2021 IFC text. Column C showed the 2021 SFPC text suggested by this code change proposal. Today's group decisions will be recorded in column D.

Each of the sections below were introduced by DHCD staff and there was a main theme of changing construction-related language to maintenance-related language.

107.2 – Says that a permit is required for stationary and mobile energy storage systems regulated by section 1207. Approved by group members as proposed.

1207.1 – No changes were made to this section. Approved by group members as proposed.

1207.1.1 and table **1207.1.1** – Following the discussion, section 1207.1.1 was approved by the group members to keep the original IFC language, and table 1207.1.1 will remain in the code as approved by the group members.

Linda Hale: Asked about the size of the systems. Is there a minimum size?

<u>Jeff</u>: The USBC says all systems have to comply, and points to section 1207.1.1, which is a capacity table. This lays out the requirements by size. If the system is smaller than the smallest one on the table, it's not regulated in section 1207.

<u>Linda:</u> A 20kw lithium ion battery is lower than the threshold. How can fire officials ensure that it's safe and maintained?

<u>Jeff:</u> Whatever can be regulated under the IFC now, this is keeping with those numbers. Whatever the general maintenance requirements are according to the capacity.

<u>Andrew</u>: 1207.1.1 is a scoping section. He wants to keep the table and the minimum. There's no maximum. It would be important for a minimum threshold for what's regulated by the SFPC.

<u>Jeff:</u> The intent is to keep with what is in the IFC. Instead of providing a table, it refers to the applicable building code.

<u>Andrew:</u> This isn't a maximum allowable quantity table. It scopes what is and what isn't regulated. Deciding what is regulated by the IFC isn't the way to go with scoping provisions and the SFPC. It should be very clear. The quantities and building code. What is regulated by SFPC has to be clear.

<u>Jeff:</u> Anything less than 3 kWh is not regulated. Anything less than minimum quantities isn't even regulated by the IFC.

<u>Linda:</u> Has been seeing a lot of fires from small lithium ion batteries and it's a concern for her.

<u>Jeff:</u> It's already in the IFC, but if it's less than the table, section 1207 doesn't even apply. Not losing anything here. There may be another section where they are included.

<u>Andrew:</u> Can't think of another section where this is referenced. There will be enforcement beyond the threshold. The SFPC is a stand-alone document. Thresholds would apply. That will regulate any hazards. For a scoping provision, there needs to be that language in the SFPC. It's fundamental for enforcement.

<u>Jeff:</u> Has there been any change in the IFC capacity? They wouldn't want an installed system being non-compliant if it was compliant in the past.

Linda: In her experience, they only add to it, not take away.

<u>Andrew:</u> If SFPC is maintenance, retroactive action would not be applicable. It won't follow what was in place when it was installed.

<u>Jeff:</u> Andrew and Linda are proposing to keep the table. Everything else will be maintenance and operation.

1207.1.2 – Approved by group members as proposed.

1207.1.2.1 – Approved by group members as proposed.

Andrew: standard exemption for communication utilities. Its' not regulated by the SFPC

1207.1.3 – Replaced installation and construction language with maintenance language. Approved by group members as proposed.

1207.1.4 – Changed language from construction related to maintenance related. After the discussion, this was approved by group members as modified, by striking the word "identified" from the proposed language and

leaving in the reference to table 1207.1.1.

<u>Florin:</u> There were a few revisions to this. It adds context to when an analysis is required as part of the permit application process. It says that the analysis shall be provided to the fire official, and it adds a paragraph defining who can prepare and stamp the analysis.

<u>Andrew:</u> Is this something required for all energy storage systems?

<u>Florin:</u> Anything specifically included in table 1207.1.1, the same as in the IFC. He asked for confirmation that table 1207.1.1 will remain in the code.

Jeff: Yes, keeping table 1207.1.1 was the decision.

<u>Florin:</u> Asked the group if they wanted to strike the word "identified", and have the sentence in item #1 read "Where ESS technologies not specifically in Table 1207.1.1". The group members agreed.

1207.1.4.1 and 1207.1.4.2 -

<u>Florin:</u> These sections should be deleted, as they refer to actions performed under the USBC, and the fire official wouldn't actually approve them, building official would. Approved by group members as proposed.

1207.1.4.3 – Approved by group members as proposed.

1207.1.5 – Following the discussion, this section was approved by group members as proposed.

Andrew: What is this requiring?

<u>Florin:</u> ESS to be maintained in such a way as to safeguard an adjacent ESS. Doing the same thing that most other sections do. Maintain in accordance with applicable building code.

<u>Florin:</u> Asked the group if they wanted to strike the section out totally or keep it as proposed. Andrew and Joshua thinks it should be stricken completely, and Steve and Linda think it should be kept as proposed.

Florin asked Andrew and Joshua if they would be opposed to keeping the language as proposed.

<u>Andrew:</u> Is ok to move forward as proposed and not strike the section out. Seems a little confusing, but it doesn't really hurt anything.

1207.1.6 and 1207.1.6.1 – No changes were made to this IFC section. Approved by group members as proposed.

{BREAK 11:05-11:10}

1207.2 – No changes were made to this IFC section. Approved by group members as proposed.

1207.2.1 – Following the discussion, this was approved by group members as proposed.

<u>Florin:</u> This was revised from construction language (under USBC) to maintenance language. Items required in commissioning plan were removed, since those requirements are in the USBC. However, the requirement to provide documentation to the fire official was retained.

Andrew: Is there another section about decommissioning?

Florin: Yes. Decommissioning falls under the purview of the building official.

<u>Andrew:</u> Can the fire official get a copy of the decommissioning plan? There's a commissioning report for the fire official, but not a decommissioning report.

<u>Florin:</u> 1207.2.3 talks about decommissioning and it has to be approved in accordance with the applicable building code.

Andrew: OK.

1207.2.1.1 – Covered under the USBC, stricken from the SFPC. Approved by group members as proposed.

1207.2.1.2 – Keeps the commissioning responsibility under the applicable building code, but allows the fire code official to request documentation if desired. Approved by group members as proposed.

1207.2.2 & 1207.2.2.1 – No changes were made to this IFC section. Approved by group members as proposed.

1207.2.3 – Following the discussion, this was approved by group members as modified according to Jeff's proposed language in the chat box.

<u>Florin:</u> This section identifies the owner as the person responsible to notify the code official about decommissioning an energy storage system. It also says that the decommissioning plan is approved in accordance with the applicable building code. Detailed steps were removed (items 1 and 2). He asked the group if "code official" (copied from the IFC) should be changed to "fire code official" in the SFPC.

<u>Andrew:</u> Decommissioning should be done by the building official, but he doesn't want to leave the fire official out of the loop.

<u>Florin:</u> For the purpose of this section in the SFPC, someone has to notify the fire official of decommissioning. Jeff: Proposed alternate language in the chat:

Jeff Brown - DHCD: Decommissioning shall be performed in accordance with the decommissioning plan approved in accordance with the applicable building code. The fire code official shall also be notified by the ESS owner prior to the decommissioning of an ESS.

1207.3, 1207.3.1 and 1207.3.2 – No changes were made to these IFC sections. Approved by group members as proposed.

1207.3.3 – This was originally not going to be modified, but there's a similar section for mobile ESS. At the beginning of the body of the code, perhaps "when required by the applicable building code" should be added. Approved by group members as modified by adding "when required by the applicable building code".

1207.3.4 – Changed the word "provided" to "maintained". Approved by group members as proposed.

1207.3.5 – Changed to "maintained in accordance with applicable building code". Approved by group members as proposed.

The changes to the following provisions were already agreed to at the last meeting of this group:

1207.3.6 – Changed "repairs" to "repairs and alterations in accordance with applicable building code". Approved by group members as proposed.

1207.3.7 and 1207.3.7.1 – Stricken. Approved by group members as proposed.

1207.3.8 and 1207.3.9 – Stricken. Deleted. Approved by group members as proposed.

1207.4 – Replace "installations" with "maintenance". Approved by group members as proposed.

1207.4.1 – No changes were made to this IFC section. Approved by group members as proposed.

1207.4.2 and **1207.4.3** – Changes were made and agreed to at the last meeting. Approved by group members as proposed.

1207.4.4 – Stricken with agreement at the last meeting. Approved by group members as proposed.

1207.4.5 and **1207.4.6** – No changes were made to this IFC section. Following discussion, this was approved by group members as proposed.

Joshua: Section 4.5 says "shall be provided". Should it say "shall be maintained"?

<u>Florin:</u> In most cases it would. However, the group has historically agreed that vehicle impact protection and signage are things that can be required by the fire official.

<u>Sean Farrell:</u> typed in the chat box "It's operational more so than construction".

1207.4.7 – Following the discussion, this was approved by group members as modified according to Steve's proposed language in the chat box, except for replacing "provided" with "maintained".

<u>Florin:</u> The addition of "Hazardous exhaust systems" was approved at the last meeting. Since then, DHCD staff has added "shall be operated and maintained" to the end of the sentence.

<u>Steve:</u> The proposed language sounds a little strange. What's currently in the IFC says discharging shall be "provided and maintained" with the hazardous exhaust system, which sounds better.

<u>Florin:</u> This version has no technical changes, just an edit to the language. He asked Steve to type in the chat box language that he would propose.

<u>Linda</u>: The concern is if there's a hazardous exhaust system, it needs to be operated properly as designed. That's why language seems funny.

Steve: typed in chat:

Steve Shapiro, AOBA/VAMA: Hazardous exhaust systems for ESS that have the potential to release toxic and highly toxic gas during charging, discharging and normal use conditions shall be provided and maintained.

Florin: What does group think about this language?

Andrew: Likes "operated and maintained" better than "provided and maintained".

Florin: Asked for a group vote, which resulted in using Steve's text, with the exception of replacing

"provided and maintained" with "operated and maintained".

1207.4.8 and **1207.4.9** – No changes were made to these IFC sections. Approved by group members as proposed.

1207.4.10 – Following the discussion, this was Approved by group members as modified by Andrew to include the words "secured and".

<u>Florin:</u> This proposal was approved by the group in the last meeting, but DHCD edited the wording a bit to read more clearly.

<u>Andrew:</u> Asked if the cabinet where the ESS system is located can be locked. He asked to add "secured" to the text to read "shall be secured and provided with signage".

Florin: Yes. That can be added.

1207.4.11 – Changed from construction to maintenance language. Approved by group members as proposed.

1207.4.12 – No changes were made to this IFC section. Approved by group members as proposed.

1207.5 – Following the discussion, this was approved by group members as modified: keep section 1207.5; delete table, and where the table is referenced, replace with "applicable building code"

<u>Florin:</u> Originally, in the base document, the subsections were deleted, but this proposal brings them back and uses maintenance language instead of construction language.

<u>Andrew</u>: Only sees one reference to the table in sub-section 1207.5.2. He proposed that sub-section 1207.5.2 stays and delete the table. Reword so that maximum allowable quantities are "in accordance with applicable building code".

Jimmy Moss: Likes that idea.

<u>Florin:</u> Asked for a vote to strike the table and where it's referenced, say "applicable building code". The vote showed support of Andrew's suggestion.

1207.5.1 – reworded construction language to maintenance language. Approved by group members as proposed.

1207.5.2 – Strike out exceptions, and as per Andrew's proposal, reference "applicable building code" instead of table 1207.5, which was stricken. Approved by group members as modified.

1207.5.2.1- Approved by group members as proposed.

1207.5.3 – Added "unless otherwise approved" and changed from construction to maintenance language. Approved by group members as proposed.

 $\{Lunch Break - 12:01 - 12:35\}$

1207.5.4 – Following discussion of **1207.5.5**, this was also Approved by group members as modified by adding "Chapter 9" to read "in accordance with Chapter 9 and the applicable building code"

1207.5.4.1 – Following the discussion, this was approved by group members as proposed.

<u>Florin:</u> Changed construction language to maintenance language, and added "in accordance with applicable building code".

<u>Andrew:</u> Wondering if this was previously a deleted section. There is a lot of different language here and the simple idea is to maintain the fire system.

<u>Jeff:</u> Originally, in the base document, all of section 1207.5, including sub-sections, was deleted.

<u>Andrew:</u> Thinks that if these sub-sections will stay in the code, they should be written in simple maintenance language. For example, the first sentence starts with "where required" and then it's a long way down before it mentions "maintained".

Florin: The way he reads it is that the systems mentioned need to be maintained.

Andrew: After reading further, he can see that.

<u>Florin:</u> One reason to keep this is that it refers to specialized systems, which would be helpful for the fire official, who may not be familiar with those types of the systems.

Andrew: Ok with this language.

1207.5.5 – Approved by group members as modified, adding "Chapter 9"

<u>Florin</u>: This deleted items 1-3 and the exception, and changed the language to apply to maintenance instead of construction.

Andrew: This should also reference Chapter 9.

<u>Florin:</u> This should then say, "in accordance with Chapter 9 and the applicable building code" in sub-sections 1207.5.4 and 1207.5.5.

- **1207.5.5.1** Changed from construction to maintenance language. Approved by group members as proposed.
- **1207.5.6** Added "unless otherwise approved in accordance with the applicable building code". Approved by group members as proposed.
- **1207.5.7** No changes were made to this IFC section. Approved by group members as proposed.
- **1207.5.8** Deleted the exception, modified language to apply to maintenance instead of construction, and added "in accordance with building code". Approved by group members as proposed.
- **1207.6** Added "maintain in accordance with the applicable building code". Deleted table. Approved by group members as proposed.
- **1207.6.1** Changed construction language to maintenance language, added "in accordance with the applicable building code". Approved by group members as proposed.
- **1207.6.1.1** Changed construction language to maintenance language, added "in accordance with the applicable building code". Approved by group members as proposed.
- **1207.6.1.2** and sub-sections **1207.6.1.2.1**, **1207.6.1.2.2**, **1207.6.1.2.3** and **1207.6.1.2.4** Following the discussion, section and sub-sections were Approved by group members as proposed.

<u>Andrew</u>: Proposed deleting the entire section and subsections, since it refers to construction.

Steve: Ventilation based on LFL is ok, but ventilation based on exhaust rate is not?

<u>Andrew:</u> This is a complicated section, since it was intended for construction, and it's difficult to break out and reclassify what needs to be stated in maintenance language. In the past, in other sections of the SFPC, they leave LFL in the code because it's important to identify an extremely hazardous situation. The exhaust rate is not so much.

<u>Steve:</u> He's not suggesting to delete the LFL section, but if they are deleting the exhaust rate, how would the code user see that?

<u>Andrew:</u> Exhaust ventilation needs to be maintained in section 6.1, but LFL needs an additional requirement.

<u>Joshua:</u> Language removed in other sections of the SFPC are left here. If these sub-sections are taken out, it's in line with what has already been done. But, it's ok with him to leave them in, if it's not construction language.

<u>Florin:</u> The proposed text does change construction language to maintenance language. Sub-section 1207.6.2.1 talks about associated standby power. If it's deleted, could it negatively impact the ability to enforce it?

Andrew: It's ok with him to leave it in.

Joshua: Likes leaving it in with the changed language. He thinks it is helpful for the inspector.

- **1207.6.2** and sub-sections **1207.6.2.1** and **1207.6.2.2** Approved by group members as proposed.
- **1207.6.2.3** No changes were made to this IFC section. Approved by group members as proposed.
- **1207.6.3** Added "maintained in accordance with applicable building code", and removed exceptions. Approved by group members as proposed.
- **1207.6.4** Changed from construction language to maintenance language. Approved by group members as proposed.
- **1207.6.5** Changed from construction language to maintenance language. Approved by group members as proposed.
- **1207.7** Added "maintain in accordance with applicable building code". Table was stricken. This is in line with other decisions. Approved by group members as proposed.
- 1207.7.1 Following the discussion, this was approved by group members as modified

Changed language to require maintenance with applicable building code. Deleted items 1-4.

Andrew: Dedicated use buildings should only be used for ESS.

<u>Florin:</u> These dedicated buildings were approved already under the USBC. They just have to be maintained here. He asked Andrew what he would propose.

Andrew: How about "shall only be used for ESS", instead of "shall be maintained"?

Florin: How about "shall continue to be used as a dedicated use building"?

Andrew: typed in chat box:

Andrew Milliken: Buildings classified as Group F-1 occupancies and approved as dedicated-use ESS buildings in accordance with the applicable building code, shall only be used or occupied as approved.

Florin: The group liked his proposal, and this was approved as modified by Andrew.

1207.7.2 – Approved by group as modified by Andrew.

<u>Florin:</u> The group may want to say something about non-dedicated-use buildings, similar to 1207.7.1, as indicated by Andrew's proposed language. "approved as non-dedicated-use buildings.....shall be used or occupied as approved".

- **1207.7.3** Added "unless already approved", and modified "shall be allowed" instead of "installed". Approved by group members as proposed.
- **1207.7.4** Modified to remove construction language, and added "maintained in accordance with the applicable building code". Approved by group members as proposed.
- **1207.8** Added "maintained in accordance..." and deleted a table. Approved by group members as proposed.
- **1207.8.1 & 1207.8.2** This previously referenced the deleted table 1207.8, it was modified to reference the text in section 1207.8. Approved by group members as proposed.
- **1207.8.3** Dimensions were eliminated. Added "shall be maintained in accordance..." Exceptions were deleted. Approved by group members as proposed. *Note: Upon further discussions later in the meeting, this was approved as modified (see notes towards end of summary, where this section was revisited.)
- **1207.8.4** Added "Where the applicable building code allows...shall be maintained in accordance with the applicable building code". Approved by group members as proposed.
- **1207.9** Added "in accordance with applicable building code". Deleted table. Approved by group members as proposed.
- **1207.9.1** Referenced the deleted table 1207.9 and changed the reference to the text in section 1207.9. Approved by group members as proposed.
- **1207.9.2** Refers to section 1207.9 instead of the deleted table 1207.9. Changes a reference to the IBC to read: "the applicable building code". Approved by group members as proposed.
- **1207.9.3** Added "Where applicable building code requires separation" and "maintained in accordance with applicable building code". Removed exceptions. Following the discussion, this was marked as non-consensus. *Note: Upon further discussions later in the meeting, this was approved as modified (see notes towards end of summary, where this section was revisited.)

<u>Andrew</u>: There's no language about how far away from storage of hazardous materials. It would be difficult for inspector to go back to applicable code at the time of installation. He doesn't know what the fix might be, but he wanted to bring it up.

<u>Florin</u>: Can appreciate that. This is similar to edits that have been done historically, because of the requirements in the code at the time approved or installed. If they keep specific measurements, it would automatically put things out of compliance that were ok before.

<u>Jimmy</u>: Inspectors have to reference the code under which it was installed.

<u>Linda</u>: The inspector might want to refer to the code before leaving for the site. A problem might be if the ESS or hazardous material was moved after it was originally installed. They should have to come into compliance with 10 ft., if it was moved. Some things should be removed, and some not. Things that are operational, which are brought in after installation should be included.

<u>Florin</u>: If something is brought into any given building, if an ESS is installed, it would have had to go through the USBC installation and approval process, even if it's in an existing building. If the 10 feet dimension is left here, anything that was already approved with a separation of less than 10 feet, and not moved, would put them out of compliance.

Andrew: This is talking about outdoor areas, not inside a building. It's not the mobile section, but it is outdoor.

There should be an understanding of what is safe, even without going back to the original code.

<u>Florin</u>: When asked to vote on moving forward as currently proposed, Linda voted thumbs down. He asked Linda what else she would propose.

<u>Linda</u>: When the ESS is installed, then combustible or hazardous materials are stored, then it's mobile, that's the concern. ESS can be approved under whatever code year it's installed, but when things are brought in later, fire official should be able to say it must be 10 ft. away from other things. She proposes leaving in the 10 ft., and striking numbers 1, 2, 3 and 4 on the list, since it's not in the purview of the fire official.

Florin: Would "where the applicable building code requires separation" still be needed?

<u>Linda</u>: No, because it will be in accordance with the SFPC in effect at the time.

<u>Florin</u>: Is she proposing to keep the IFC language and strike items not under purview of fire official? Linda: Yes.

Jimmy: Is not in agreement. If any of those materials are present, it goes back to the building code.

Steve: Asked Linda what she would do about the exceptions (which were stricken in the proposal)

<u>Linda:</u> The exceptions are not buildings, so they would be structures that would fall underneath #1 and have prescriptive language.

<u>Florin</u>: 1207.9.3 will be marked as non-consensus. He encourages group members to join together before the next meeting to see if they can come up with a new proposal in cdpVA. This can carry over until before May 1st, or if a Thursday meeting is needed this week to exhaust the rest of this agenda, it can be addressed at the end of that meeting.

{BREAK: 1:40 - 1:45}

1207.9.4 – Approved by group members as modified per Andrew's proposal to add "in accordance with Chapter 9 and the applicable building code"

Andrew: Add a reference to Chapter 9 to say "in accordance with Chapter 9 and the applicable building code".

1207.9.5 – Approved by group members as proposed.

Andrew: This doesn't specify what the separation is.

<u>Florin</u>: The charging statement 9.5 says "applicable building code", so all items listed fall under that. Approved as proposed.

1207.9.6 – Added "maintained in accordance with applicable building code" and struck the specific construction language in the line items. Approved by group members as proposed.

1207.10 – The table was left here because the sections referenced have all been modified today. However, footnotes were stricken as they were exceptions to the construction code requirements. The section and table were approved by group members as proposed. This will be double-checked by DHCD staff to make sure all of the sections referenced in the table were approved.

1207.10.1 and **1207.10.2** – No changes were made to these sections. Approved by group members as proposed.

1207.10.3 – Strike construction language, and add that permits are required in accordance with section 107.2. Approved by group members as proposed.

1207.10.4 Construction documents replaced with operational documents. Approved by group members as proposed.

1207.10.4.1 – Added "at the minimum" so as to not limit what the fire official could ask for, and changed operation to operational. No other changes were made. Approved by group members as proposed.

1207.10.5 – Added "approved in accordance with applicable building code:" Changed "established on the construction permits" to "identified on the operational permits". Approved by group members as proposed.

1207.10.6 – Exceptions 1 and 2 were modified to say "applicable building code" and "shall be maintained". Approved by group members as proposed.

1207.10.7 & 1207.10.7.1 – No changes were made to this IFC section. Approved by group members as proposed.

1207.10.7.2 – Approved by group members as proposed.

1207.10.7.3 – *Note: Upon further discussions later in the meeting, this was approved as modified (see notes towards end of summary, where this section was revisited.)

Florin: This is similar to the non-consensus section earlier. He asked what the group thought about it.

Andrew: How about: "where the applicable building code requires separation of 10 feet, the following..."

<u>Florin:</u> If that is used here, it could also be used for the other section.

<u>Andrew:</u> Thinks there were actually three non-consensus sections.

Florin: Decided to hold off until the end, and to circle back to it.

1207.10.7.4 – Changed from construction to maintenance language and added "Unless otherwise allowed by the applicable building code, ..." Approved by group members as proposed.

1207.10.7.5 Changed to say "operational" permit. Approved by group members as proposed.

1207.10.7.6 – Approved by group members as proposed.

<u>Florin:</u> Fences with gates or other barriers. Added "in accordance with the applicable building code". This one does say 5 ft.

Andrew: Is ok with this as it is.

1207.10.7 No changes were made to this section. Approved by group members as proposed.

1207.11 – Shall be "maintained" instead of "installed". Approved by group members as proposed.

1207.11.1 – Added "Unless otherwise approved with the applicable building code", exceptions were stricken as they were building code provisions. Approved by group members as proposed.

1207.11.2 – Changed "installation" to "maintenance" and added "applicable building code". Approved by group members as proposed.

1207.11.2.1 – Adds "where...required by the applicable building code" and "shall be maintained". Approved by group members as proposed.

1207.11.3 – Added "Unless otherwise approved", changed "installed" to "located" and changed "IBC" to "VCC". Approved by group members as proposed.

1207.11.4 – Added "unless otherwise approved..." Approved by group members as proposed.

1207.11.5 – Changed "electrical installation" to inverters. Removed installation in accordance with NFPA 70.

Added "where required by applicable building code". Approved by group members as proposed.

1207.11.6 – This was approved by group members as modified by Andrew, adding "in accordance with Section 907.2.10" and "in accordance with Chapter 9".

<u>Florin</u>: This replaces construction language with maintenance language.

Andrew: please add reference to Chapter 9 in the first sentence and last sentence.

1207.11.7 – Removed reference to mechanical code, replaced with "applicable building code". Approved by group members as proposed.

1207.11.8 – Approved by group members as modified by Andrew to read "operated and maintained..."

Florin: Revised construction language to maintenance language and added "applicable building code".

Andrew: The last sentence should say "operated and maintained in accordance with the applicable building code".

1207.11.9 – Added "Unless otherwise approved in accordance with the applicable building code". Approved by group members as proposed.

1207.11.10 – Added "the applicable" NFPA 70. Approved by group members as proposed.

VCC New Section

<u>Florin:</u> this section will say that Electrical ESS shall comply with applicable provisions of IFC. This will make it very clear to all that ESS is regulated by the IFC. Approved by group members as proposed.

<u>Florin:</u> Also noted that another group is making proposals to bring the IFC into the VCC. DHCD staff will ensure that the Board knows about both proposals and how they can work together or independently.

REVISIT Sections 1207.8.3, 1207.9.3 and 1207.10.7.3 – Approved by group members as modified by Andrew and further modified by Steve.

Florin: Asked Andrew if he had proposed language to address the concerns in this section.

<u>Andrew</u>: Other sections do provide prescriptive language that says when required by the applicable building code for a separation of xy feet, then, the ESS must be maintained. It may have drawbacks, but using such language might get consensus for now. It may still be readdressed in the next code cycle.

<u>Florin</u>: It sounds like it could be a good compromise. Requiring a certain distance, when the applicable building code so requires.

<u>Jimmy:</u> he would be agreeable to that.

Andrew: typed in the chat box:

Andrew Milliken: Where the applicable building code requires separation of 10 feet (3048 mm) from the following exposures, the separation shall be maintained in accordance with the applicable building code.

Steve: How about saying "minimum of 10 feet", which is in the IFC language?

<u>Florin:</u> Yes, that's good. All 3 sections will be approved as modified, using the appropriate language for each section as suggested by Andrew and further modified by Steve.

Other:

<u>Florin:</u> As a heads up, the DHCD staff proposal referencing requirements for permits is still referencing Chapter 1. Staff will check the IFC sections to make sure that Chapter 1 is there. If not, DHCD staff will create proposal for it.

Assignments / Next steps / Next meeting:

<u>Florin:</u> This group will probably meet one more time before the next Workgroup meeting on June 10th and discuss any other proposals that have been submitted.

<u>Steve:</u> This morning, the group discussed the fire safety door construction that might be further discussed this coming Thursday. He asked if that was still the intent.

<u>Jeff:</u> The group should meet before the May 1st deadline to discuss Andrew's three items. DHCD can share the 1207 decision spreadsheet with the proponent of the EB1102 proposal, to see the direction the group is heading, and allow the proponent to align with this group's proposal.

<u>Andrew:</u> Has a good idea of what to do with B3302 and EB1209. The F3303 proposal was decided as consensus for approval.

Steve: Yes, that's what he has in his notes.

<u>Richard Potts:</u> It was consensus, but got grouped back in with the other two.

Jeff: Asked if Andrew would like to meet again.

<u>Andrew:</u> He will modify according to the group feedback before May 1st for the next General Workgroup.

Jeff: The spreadsheet will be cleaned up and the 1207 proposal will be reflected accordingly.

<u>Florin:</u> Sections that have not been modified will not be included in the final proposal.