STATE OF TENNESSEE
DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT
BOARD OF BOILER RULES

QUARTERLY MEETING OF THE
STATE OF TENNESSEE
BOARD OF BOILER RULES

Via Zoom Videoconference

March 10, 2021

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APPEARANCES:

Brian Morelock, Chairman
Owner-User Representative

David W. Baughman
Owner/User Representative
Allied Boiler & Supply, Inc.
4006 River Lane
Milton, Tennessee 37118

Harold F. Bowers
Insurance Representative
Centerville, Tennessee

Jeffery Henry, Board Member
Boiler Manufacturer Representative
ATC-CES, Chattanooga, Tennessee

Dr. Keith Hargrove, Board Member

Chris O'Guin, Assistant Chief Boiler Inspector

Thomas Herrod
Assistant Commissioner, State of Tennessee

Daniel Bailey, Esq.
Legal Counsel, State of Tennessee

Carlene T. Bennett
Board Secretary, State of Tennessee

Jamie Presson
Executive Admin. Assistant, State of Tennessee

Michelle Irion
Boiler Admin. Staff Supervisor, State of Tennessee

Guest Appearances:

ECS CONSULTING and BOISCO TRAINING GROUP
Marty Toth

NEVILLE ENGINEERING
James Neville

CINCINNATI INSURANCE
Eugene Robinson

BRADLEY, ARANT, BOULT, CUMMINGS, LLP
Christopher Puri, Attorney for STERIS Corporation

STERIS CORPORATION
Marie LaFrance, Senior Product Manager
Mark Chiffon
Roger Andrusky
Sam Watkins
Vito Scotese

TRISTAR SOUTHERN HILLS MEDICAL CENTER
David Lytle

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Court Reporting Services and Zoom Videoconferencing:

STONE & GEORGE COURT REPORTING
Nan George, Zoom moderator
Cassandra M. Beiling, LCR

** Reporter's Note: All names are spelled phonetically unless otherwise provided to the Reporter by the parties.

A G E N D A

I. Call Meeting to Order

II. Introductions and Announcements

III. Adoption of Agenda

IV. Approval of the December 16, 2020 Meeting Minutes and January 10, 2021 Special-called Meeting Minutes

V. Conflict of Interest Policy & Acknowledgment

VI. Old Business
None

VII. New Business
21-01 -TriStar Southern Hills Medical Center

VIII. Rule Case & Interpretations
BI 21-01 - STERIS Corporation request
BI 21-02 - ECS Consulting LLC request

XI. Open Discussion Items
* David Baughman - TCA 68-122-110(a)(2)
* Variance Guideline & Checklist Revisions

X. Announcement of Next Meeting
Unless the Board decides otherwise, the next regularly scheduled meeting of the Board of Boiler Rules will be held 9:00 a.m. June 9, 2021, at the State of Tennessee Department of Labor and Workforce Development building located at 220 French Landing Drive, Nashville, Tennessee.

XI. Adjournment

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CHAIRMAN MORELOCK: I think we have all of the board members online now, and so I want to welcome them and I want to welcome everybody to this March Tennessee board meeting. I want to welcome you to the March 10th Tennessee board meeting.

I hope you have an agenda handy. That's what we're going to work from today. And so with that said, I am going to call the meeting to order. That's the first item on our agenda. And so as far as -- we'll adopt the agenda here in just a moment but I'm going to go on to Item 2 which is introductions and announcements. And so I'll go around and let everybody introduce themselves. And bear with me. I will probably leave somebody out and I'm apologizing now. I'll try to use the participant list to do that. If I do leave you out, I am sorry, but we'll get everybody introduced here in just a moment.

So I'm going to start with Mr. O'Guin.

MR. O'GUIN: Chris O'Guin, Assistant Chief Boiler Inspector.

CHAIRMAN MORELOCK: All right.

Mr. Herrod?

MR. HERROD: Tom Herrod, Assistant Commissioner, Workplace Regulations and Compliance.

CHAIRMAN MORELOCK: Thank you.

Ms. Bennett?

MS. BENNETT: Carlene Bennett, Board Secretary.

CHAIRMAN MORELOCK: Okay.

Ms. Irion?

MS. IRION: Hi. I'm here with Chris.

CHAIRMAN MORELOCK: Okay. All right. Good.

MS. IRION: I am the admin supervisor here in the Boiler Inspection Unit.

CHAIRMAN MORELOCK: Thank you.

MS. IRION: Thank you.

CHAIRMAN MORELOCK: Mr. Bailey?

MR. BAILEY: Dan Bailey, legal counsel.

CHAIRMAN MORELOCK: Thank you, sir.

Mr. Hargrove?

MR. HARGROVE: Good morning, everyone. Keith Hargrove, board member. Good to

see all of you and thanks for your kind thoughts over the last few months. And, again, good to see you guys.

CHAIRMAN MORELOCK: Good to see you.

Mr. Henry?

MR. HENRY: This is Jeff Henry, board member.

CHAIRMAN MORELOCK: Mr. Bowers?

MR. BOWERS: Harold Bowers, board member. FM Global Insurance Company. Glad to see you-all today.

CHAIRMAN MORELOCK: Glad to see you as well.

Mr. Baughman?

MR. BAUGHMAN: Dave Baughman, board member with Allied Boiler & Supply, Incorporated. And it's good to see everybody as well.

CHAIRMAN MORELOCK: Good to see you.

I am Brian Morelock. I represent owners and users of unfired pressure vessels, and I work for Eastman Chemical Company.

So now I'm going to throw caution to the wind and try to go through this participant

list. And again, if I leave you out, I apologize, but let's give this a shot.

Mr. Robinson?

MR. ROBINSON: Eugene Robinson, Cincinnati Insurance, boiler inspector.

CHAIRMAN MORELOCK: Okay.

Mr. Puri?

MR. PURI: Yes, Mr. Chairman. I'm Chris Puri. I'm with Bradley Law Firm. I'm the outside counsel for STERIS.

CHAIRMAN MORELOCK: Welcome. Thank you.

Mr. Neville?

MR. NEVILLE: James Neville, President of Neville Engineering, representing Southern Hills Medical Center.

CHAIRMAN MORELOCK: Thank you.

Mr. Chiffon?

MR. CHIFFON: I'm Mark Chiffon. I'm the Director of Research and Development for STERIS Corporation.

CHAIRMAN MORELOCK: Welcome. Thank you.

Mr. Toth?

MR. TOTH: Marty Toth, ECS

Consulting and The Boisco Training Group.

CHAIRMAN MORELOCK: Welcome, Mr. Toth.

Okay. So help me out with -- I've got a screen name here. It's M-L-A-F-R-A-N-C.

MS. LaFRANCE: Hi. I'm Marie LaFrance, and I'm Senior Product Manager for STERIS Corporation.

CHAIRMAN MORELOCK: Welcome and thank you. And if you would put your name in so we can record that into the minutes, please, that would be very helpful.

MS. LaFRANCE: Okay.

CHAIRMAN MORELOCK: Mr. Andrusky?

MR. ANDRUSKY: Roger Andrusky, Field Service Engineer for STERIS Corporation.

CHAIRMAN MORELOCK: Welcome. Thank you.

Vito Scotese?

MR. SCOTESE: I'm Vito Scotese, Lead Engineering Technician at STERIS.

CHAIRMAN MORELOCK: Welcome. Thank you.

Addie Chandler?

MR. LYTLE: Yes. This is David

Lytle with the Southern Hills team here.

CHAIRMAN MORELOCK: Welcome.

We still have a 615 phone number. Who is that?

MS. GEORGE: I think that was Mr. Lytle that just spoke.

CHAIRMAN MORELOCK: Okay.

MS. GEORGE: Is that your phone number, Mr. Lytle, 781-4124?

(No verbal response.)

MS. GEORGE: David Lytle?

MR. LYTLE: Yes. This is -- 4124 is our number.

MS. GEORGE: Okay. Could you spell your last name, please?

MR. LYTLE: Yes. It is L-Y-T-L-E.

MS. GEORGE: Thank you.

CHAIRMAN MORELOCK: Okay. If I've left someone out, please let me know. I think I've gotten everyone, but if not --

MR. WATKINS: This is Sam Watkins. I'm the Director of Marketing with STERIS.

CHAIRMAN MORELOCK: Okay. Thank you.

MR. WATKINS: My pleasure.

CHAIRMAN MORELOCK: I knew I would --

MR. WATKINS: We've got a big group here. No worries. Thank you.

CHAIRMAN MORELOCK: Well, welcome to everyone.

So now have I left anyone else out?

MS. PRESSON: This is Jamie Presson, Executive Admin Assistant with WRC.

CHAIRMAN MORELOCK: Okay. I'm sorry. I had your name up here. I didn't call you. Thank you very much.

All right. Anybody else?

(No verbal response.)

CHAIRMAN MORELOCK: All right. Thank you very much. So that takes us to introductions. Are there any announcements before we adopt the agenda?

MR. HERROD: Mr. Chairman, this is Tom Herrod, Assistant Commissioner. I think it's as good a time as any to announce the retirement of Sam Chapman, who's been the Boiler Chief for the past five years. He's been with the State almost 20 years, and his last day was this past Friday. And so he was a veteran with 20 years in

the Navy and then 20 years with the State. And so I'm sure his retirement will be filled with fishing and gardening.

And we wish him well, but he's a familiar face that's normally always with us on these meetings, so I just wanted to announce that and wish him well and acknowledge his service to the State.

CHAIRMAN MORELOCK: Thank you, Mr. Herrod.

And we are excited for his retirement. That's something we all eventually want to work toward. And certainly, he's got big shoes to fill, and we've certainly enjoyed the relationship we've had with him professionally and personally. And we wish him the best.

Any other announcements?

MS. BENNETT: Mr. Chairman, this is Carlene. I see that I have omitted something on the agenda that I would like you to consider adding. And that would be the Assistant Chief's report.

CHAIRMAN MORELOCK: Okay.

MS. BENNETT: We typically have that on there. I'm not sure how I left that off,

but if we could add that somewhere near the top, then Chris will give that report.

CHAIRMAN MORELOCK: Okay. I tell you what we'll do. We will add that before Old Business.

MS. BENNETT: Okay. Perfect. Thank you.

CHAIRMAN MORELOCK: Thank you, ma'am.

Any other announcements?

(No verbal response.)

CHAIRMAN MORELOCK: All right. Hearing none, I would ask, if you have cell phones and all, if you would mute those during the conversations so it won't be distracting. We're certainly looking forward to the day when we get to meet face-to-face and be able to have these conversations face-to-face. But we are thankful for technology, and it allows us to meet virtually.

So as Nan has already alluded to, if you have a question, you can use the reactions button to raise your hand. And I will do my best to monitor that, and Carlene and others will make sure that I pay attention to that. I'll take all

the help I can get.

So moving on to Item 3, Adoption of the Agenda, I hope everyone has a copy of that agenda available to them. Are there any other corrections or additions to the agenda, other than adding the Chief's report?

(No verbal response.)

CHAIRMAN MORELOCK: Okay. Hearing none, with an electronic meeting, what we're going to do is have a roll-call vote by the board members. So do I have a motion to adopt the agenda as amended?

MR. HENRY: So moved.

CHAIRMAN MORELOCK: Okay. So I have a motion from Mr. Henry.

MR. BOWERS: Second from me, Harold Bowers.

CHAIRMAN MORELOCK: And a second from Mr. Bowers. Thank you.

Any other discussion?

(No verbal response.)

CHAIRMAN MORELOCK: All right. So I'm going to call the vote here. So, Mr. Baughman?

MR. BAUGHMAN: Aye.

CHAIRMAN MORELOCK: Mr. Bowers?
MR. BOWERS: Aye.
CHAIRMAN MORELOCK: Mr. Hargrove?
MR. HARGROVE: Aye.
CHAIRMAN MORELOCK: Mr. Henry?
MR. HENRY: Aye.
CHAIRMAN MORELOCK: Thank you. We have an agenda.
That will take us on to Item 4 on the agenda, which is approval of the December 16, 2020 meeting minutes, as well as the January 10, 2021 special-called meeting minutes. Are there any corrections to the minutes?
(No verbal response.)
CHAIRMAN MORELOCK: All right. Hearing none, do I have a motion to accept the December 16, 2020 minutes and the January 10th, 2021 special-called meeting minutes?
MR. BAUGHMAN: Move to accept.
CHAIRMAN MORELOCK: Okay. Thank you for that motion. Do I have a second?
MR. HARGROVE: Second, Keith Hargrove.
CHAIRMAN MORELOCK: Okay. So Mr. Baughman made the motion and Mr. Hargrove

seconded it. Any other discussion?

(No verbal response.)

CHAIRMAN MORELOCK: All right. Hearing none, I'm going to call for the vote.

Mr. Baughman?

MR. BAUGHMAN: Aye.

CHAIRMAN MORELOCK: Mr. Bowers?

MR. BOWERS: Aye.

CHAIRMAN MORELOCK: Mr. Hargrove?

MR. HARGROVE: Aye.

CHAIRMAN MORELOCK: Mr. Henry?

MR. HENRY: Aye.

CHAIRMAN MORELOCK: All right. The meeting minutes are approved. That will take us to Item 5 which is Conflict of Interest Policy and Acknowledgment.

If the board members have not provided that to Ms. Bennett, please do that. I know with -- since we're not meeting live, you can make a PDF of that after you get it signed and everything and you can take a cell phone picture of it and whatever it takes for them to have a record of that. So it's just an item for information.

So that will take us to our next item

on the agenda which is the Chief's report. So I'll turn that over to Mr. O'Guin.

MR. O'GUIN: Thank you, Chairman. I'm going to attempt to share my screen here. Inspections July 1, 2020 through March the 1st, 2021, the state inspectors did 9,991 inspections; insurance and company, 18,325, bringing a total of 28,316. Delinquency rate for the first quarter of 2020 was 1.8. That was an average right when we started the COVID pandemic.

The second quarter of 2020, we jumped to 4 percent. The third quarter of 2020, we had started coming down to 3.7. And the fourth quarter was 3.5. The fourth quarter is probably -- it should have been a little lower. That's when we were having some computer issues with our system. Some inspections are hung up in the mid-approval status. The first quarter of 2021, we're down to 2.3 percent, so we are steadily falling. We're averaging about two-tenths a week.

The high-pressure delinquent, as of to date, states 62 and insurance has 294, bringing a total of 356 vessels. The variances, we have 70 active. We performed 15 variance inspections this

quarter; 12 passed and 3 failed.

That's all I have, Chairman.

CHAIRMAN MORELOCK: Thank you. Are there any questions or comments for Mr. O'Guin about the Chief's report?

MR. BAUGHMAN: This is Dave Baughman, board member.

Mr. O'Guin, which were those three that failed?

MR. O'GUIN: Country Delite in Nashville, Dow Chemical, and -- I hope I pronounce this right -- Leclerc Foods.

THE REPORTER: How do you spell that last one?

MR. O'GUIN: L-E-C-L-E-R-C.

THE REPORTER: Thank you.

MR. O'GUIN: And Country Delite has already notified us that they are ready for reinspection. I have given them a little time. They called in, like, two or three days that they were ready for reinspection. So I don't want to jump back over. I want to give them time to, you know, be sure they are ready.

MR. BAUGHMAN: Right. And one other question, Mr. O'Guin. I noticed we listed

the high-pressure delinquents. Is there information on low-pressure delinquents or unfired delinquents also, or is that high pressure all encompassing?

MR. O'GUIN: I can break it down by category. We didn't on this meeting here, but I can for future meetings, if the Board would like it.

MR. BAUGHMAN: I was just interested in the total, overall delinquency, just for whatever information that's worth.

MR. O'GUIN: I would be glad to get it for you.

MR. BAUGHMAN: Thank you, Mr. O'Guin.

MR. O'GUIN: Yes, sir.

MR. BAUGHMAN: Good report.

MR. O'GUIN: Thank you.

CHAIRMAN MORELOCK: Any other questions or comments?

(No verbal response.)

CHAIRMAN MORELOCK: All right. Thank you, Mr. O'Guin. That was an excellent report.

That takes us to Old Business, and we

do not have any old business, so we will move on to New Business. And so our first item of new business is 21-01. TriStar Southern Hills Medical Center in Nashville is requesting a variance for three high-pressure boilers under the requirements of Chapter 0800-03-03.08(11). So if you will introduce yourselves and present your manual and your request for a variance.

And before we do that, are there any conflicts of interest with any of the board members?

(No verbal response.)

CHAIRMAN MORELOCK: Okay. I see no conflicts of interest. So if you will introduce yourself and present your manual, please. Thank you.

MR. NEVILLE: Yes. This is James Neville with Neville Engineering. I'm presenting for Southern Hills Medical Center. Also online should be David Lytle, and I'll let him introduce himself as well.

MR. LYTLE: Yes. My name is David Lytle. I am the director of plant operations here at TriStar Southern Hills. With me, I have Addie Chandler -- she is our administrative assistant --

and Tony Walpole, which is my department's supervisor.

THE REPORTER: Can you spell Tony's last name?

MR. LYTLE: Walpole, W-A-L-P-O-L-E.

THE REPORTER: Thank you.

MR. NEVILLE: We would like to propose a variance for three high-pressure boilers. In our manual, we list the site plan on page 2 of our manual. It shows the location of the PBX office and the boiler room. It's approximately 386 feet apart. The remote station will have a shutoff for each of the three boilers at the remote station.

And we list the job descriptions for those that will be monitoring the boilers at the remote station as a PBX operator or a security officer.

As far as the individuals that will be monitoring the boilers in the boiler room as a boiler attendant, that will be a maintenance mechanic and a security officer on third shift. The security officer will be a monitor-only position. The hospital has an on-call maintenance mechanic every time that a security officer will

be monitoring the boilers.

The -- as far as the items -- or the boilers are identified in Appendix A, as far as -- well, there's 1, 2, and 3. That's one Kewanee and two Cleaver-Brooks boilers. And those do use an atmospheric DA.

THE REPORTER: I'm sorry. Can I interrupt, Mr. Neville?

MR. NEVILLE: Yes.

THE REPORTER: What was the first boiler?

MR. NEVILLE: Kewanee.

THE REPORTER: Thank you.

MR. NEVILLE: Yes.

The controllers on those are the Honeywell RM7800 series. And that's listed in Appendix B. And, also, in Appendix B, we show the location of the emergency boiler shutoffs at the exit doors to that boiler room.

If there are any other questions that we can field, we would be glad to do so.

CHAIRMAN MORELOCK: Thank you, Mr. Neville.

Do I have a motion to discuss?

MR. BAUGHMAN: So moved.

CHAIRMAN MORELOCK: Thank you, Mr. Baughman. Do I have a second?

MR. BOWERS: This is Harold Bowers. I second.

CHAIRMAN MORELOCK: Thank you, Mr. Bowers.

What questions or comments do the board members have for this proposal for a variance?

MR. BAUGHMAN: I'll start. This is Dave Baughman, board member.

Mr. Neville and David, thank you for presenting this. I've got a few items that are of question here. You just made mention of the maintenance mechanic being the boiler attendant, but also the security officer being the boiler attendant but monitoring only. So kind of describe that, because that's a little bit contradictory of boiler attendant versus remote attendant if he's monitoring only.

MR. NEVILLE: As far as the four-hour checks on the boiler, during third shift, part of the boiler attendant procedure for this security officer would be to do those checks on the boiler.

Now, as far as the monitor position, they would not be operating the boiler. But if it were to go into a fault condition, they would call the maintenance mechanic to troubleshoot that boiler from that point on.

MR. BAUGHMAN: So when we say call a maintenance mechanic, that means that a maintenance mechanic or the boiler attendant isn't necessarily on site, but they would be calling one in to come in and attend to it, correct?

MR. NEVILLE: That is correct.

MR. BAUGHMAN: All right. Well, then, that's contradictory to page 8, which says a boiler attendant shall be on site at all times.

MR. NEVILLE: Well, the -- right. In the role that the security officer would be playing, they would be the boiler attendant. Now, the boiler would -- if the boiler went into a shutdown mode, they would call a maintenance mechanic to bring that boiler back on line.

MR. BAUGHMAN: But your description for the security officer on page 7 says "monitor only."

MR. NEVILLE: Yes.

MR. BAUGHMAN: Well, then, he

couldn't act as a boiler attendant.

MR. NEVILLE: He's attending --

MR. BAUGHMAN: It's in parentheses.

MR. NEVILLE: Yes.

MR. BAUGHMAN: It's in parentheses on page 7, personnel type --

MR. NEVILLE: Yes.

MR. BAUGHMAN: -- security officer, parentheses, monitor only. So he would not be acting as a boiler attendant if he's monitoring only. He would have to call a maintenance mechanic in. The boiler would then have to be shut down during that period of time until a maintenance mechanic came in to --

MR. NEVILLE: That is correct.

MR. BAUGHMAN: Okay.

MR. NEVILLE: So the security officer's training would be to go to the boiler room, do the log for the boiler. But if the boiler went into a fault condition, they would not be the one troubleshooting that boiler and bringing it online.

MR. BAUGHMAN: Okay. Well, I'm still a little confused in the nomenclature, because it does state that he's monitor only.

MR. NEVILLE: Yes.

MR. BAUGHMAN: And if you have him to do the four-hour checks, he's more than monitoring only. He's acting in a different capacity. So I'm a little confused in that description. What it sounds like is that we're lacking personnel during a particular shift and we're trying to implement a security officer into this position. And the way it's listed in the manual, it doesn't describe that real well.

I hear what you're saying, but what's written is different than what you're saying. I'll leave that -- I'll close with that. I've got further comments, but I want to leave that open for some other people to discuss.

MR. NEVILLE: Okay.

CHAIRMAN MORELOCK: Mr. Baughman, your comment is correct, and I think what might bring clarity is we've seen other variance manuals that have a dedicated boiler monitor that would be a security guard or a PBX or something. But you're right, they would not show up under the boiler attendant procedures. They would need to come under a boiler monitor procedure. Is that what you're kind of getting at?

MR. BAUGHMAN: Yeah. I don't see -- I'm a little confused because of the description of "monitor only," and then the description given verbally that the security officer is also acting as a boiler attendant. And I'm a little confused with that, as far as how it's actually being handled.

MR. BOWERS: So --

CHAIRMAN MORELOCK: Go ahead, Mr. Bowers.

MR. BOWERS: Yeah. Definitely, we don't -- the "attendant" is kind of a vague term. Is he a boiler operator or a boiler monitor? I think that's what Dave is trying to get at.

MR. NEVILLE: Right.

MR. BOWERS: He can't turn the boiler on but yet he can turn it off.

MR. NEVILLE: Correct.

MR. BOWERS: So I think that's where the description of the attendant may be a little vague, I think.

MR. NEVILLE: Right. So the boiler operator would be the maintenance mechanic. But the security officer could fall under the role of a boiler attendant, as far as going to the boiler

room and filling out the logs for that four-hour shift.

MR. BAUGHMAN: If that's the case, Mr. Neville -- excuse me, Dave Baughman, board member --

MR. NEVILLE: Yes.

MR. BAUGHMAN: -- then I think under personnel type, it should not be in parentheses "security officer monitor only." Because that adds to some confusion.

And in this, we don't have any clarification on a boiler operator. This is either a boiler attendant or a remote attendant. So we don't have anything classified as the boiler operator in this manual. So he's either a boiler attendant and a remote attendant or he's just a remote attendant. But regardless, a boiler attendant shall be on site at all times. So it's important how that security officer is classified, because if he's just being a remote attendant, and then during this shift that we need him to take this monitoring or the boiler logs, to fill out the logs, filling out the logs doesn't necessarily come under a boiler attendant. He's just filling out a log sheet, and he doesn't necessarily have

the qualifications of a maintenance mechanic, the background of a maintenance mechanic, the background of a boiler man. All he's doing is coming in and filling out a log sheet. And I don't necessarily think that that adds to the level of safety of what we're trying to get at through this remote variance.

There again, that's somewhat of an opinion, but I think it's pretty clear a security officer is good at monitoring, is probably not as functionally adept at boiler operations.

MR. NEVILLE: And we agree. I believe the clarification there was showing that the security officer is not a qualified boiler operator. So they are not -- they would not be qualified to operate the boiler, you know, from a fault, a boiler fault position. That's why a maintenance mechanic would have to be the one to restart a boiler, you know, from a situation like that. So what we were trying to do is identify that the -- what the security officer would do, you know, in that shift, that monitoring operations are his qualification, not boiler operations.

MR. BAUGHMAN: Okay. Well, then,

on page 8 where it says "boiler attendant shall be on site at all times," then that would be struck because there is not a boiler attendant on site at all times. There's remote monitoring attendants but not necessarily a qualified boiler attendant.

CHAIRMAN MORELOCK: So, Mr. Neville, I'm not going to tell you how to write your manual, but maybe a suggestion would be if you're going to have the security officer to be a monitor only, maybe you should have sections in this manual to have procedures for normal daily activities for the security officer as well as emergency procedures as the emergency monitor -- or monitor only. Would that satisfy your --

MR. NEVILLE: We can add those.

MR. BAUGHMAN: Yes. I believe that would help in the clarification of it. I'm still looking for some delineation between what is -- who is doing what and when, I guess, and the level of competency of those people. So I guess I'm still grasping at that.

MR. TOTH: (Indicating.)

CHAIRMAN MORELOCK: Mr. Toth?

MR. TOTH: Yes, Mr. Chairman. I think the biggest concern that we have -- because

I have quite a few clients myself, just as Mr. Neville does, that utilize security forces as the boiler attendant. I'm concerned in that support, what Mr. Baughman is saying, 100 percent. The security force has to still be -- if they are serving the role as the attendant, per Tennessee law, they still have to be certified. That certification comes from the certification, in this case here, Southern Hills. But it also has to be acceptable to the Board because we are extending it out four hours.

If it is a security guard every 20 minutes that's required to go take readings, that's one thing. It sounds to me like they're not going to have maintenance individuals on site, which does not follow the standard law that you have to have a certified boiler operator on site 24/7 for a high-pressure boiler.

What we do with our clients is those, that security force that serves that role, has to go through and pass the same course, take the same exam that the maintenance personnel or the everyday boiler operator has to take. So if they don't pass that exam, they're not able to stay in that post. So I just wanted to add that into the

mix. Thank you.

CHAIRMAN MORELOCK: Thank you, Mr. Toth.

What other comments does the Board have?

MR. BOWERS: This is Harold Bowers.

And I agree with Dave and Marty. Basically, you've got to have somewhere difference -- you don't have to actually have a boiler operator, per se, or -- but you've got to be more than a remote attendant. You know, I've had a situation with one of my clients where the security guard went down there and he checked on the boilers and an incident happened and he didn't know how to take care of it.

And so if they need more training than just somebody to fill out a log -- you need to know how to -- you might not have to have the full qualifications of actually a boiler operator, starting a boiler, but he needs to know how to look for emergency situations and handle those situations. So his training must be more than just walking through the boiler room and signing a log. That's my comment.

CHAIRMAN MORELOCK: Thank you,

Mr. Bowers.

MR. TOTH: (Indicating.)

CHAIRMAN MORELOCK: Mr. Toth?

MR. TOTH: Yes. Just to kind of add on to what Mr. Bowers said, in a lot of our manuals where we do have a security force that's the boiler attendant, we specifically state within those manuals that those -- we call them boiler guards -- they are not authorized to restart the boiler.

At that particular time is when they would call in a different technician. But because they are certified as a boiler attendant, they are able to stay in that post. The client just chooses not to allow that particular boiler guard to restart the boiler.

MR. NEVILLE: And that's the same situation that we're proposing in this. Now, you know, if the security officer in that role is, you know, not acceptable, the hospital could look at having maintenance mechanics around the clock. But that isn't what they initially proposed.

MR. BAUGHMAN: This is Dave Baughman, board member.

I guess one of the issues gets back

to training. As we know, the security officers, that position can change. And so because of that, then you have this constant training that's having to come about. And then that gets down to page 5 under training where it says the remote attendant variance training is provided by the PBX supervisor or the maintenance mechanic.

And when you refer back to page 7, under -- and that's under the personnel responsible for remote monitoring. When you go to the training under the boiler attendant procedures, page 7, it says the maintenance mechanic, referencing Terry Armstrong, shall be responsible for training all incoming personnel assigned to boiler duties and for keeping a documentation log of initial training and training thereafter.

So it lists the maintenance mechanic responsible for training all incoming personnel, but it also gives the PBX supervisor or the maintenance mechanic on the previous page and --

MR. NEVILLE: Well, there's two different -- one is the training for the boiler attendant, and the other is the remote monitor at the PBX. So I guess there's two different

positions that they're training there.

MR. BAUGHMAN: Okay. So the security officer would fall under both. He would fall under the PBX operator or the maintenance mechanic for the remote monitoring, and he would also be trained by the maintenance mechanic for the boiler attendant procedures; is that correct?

MR. NEVILLE: That is correct. That is correct. Because there's two separate responsibilities for either side.

MR. BAUGHMAN: Okay. So any time we have a personnel change, that would go back through that training procedure.

MR. NEVILLE: That is what we are proposing, yes.

MR. BAUGHMAN: Thank you, Mr. Neville, for the discussion. I'll carry on with some other questions I have. How many maintenance mechanics do we have on staff?

MR. NEVILLE: Mr. Lytle can answer those questions. I believe we show them in the organizational chart.

MR. LYTLE: We have six individuals on maintenance staff, and we have five actual mechanics.

MR. BAUGHMAN: Very good. So the maintenance mechanics would be the three that would be qualified under boiler attendants; is that correct?

MR. LYTLE: That would be correct.

MR. BAUGHMAN: Okay. So if we've got one per shift or what have you, I guess my question revolves, then, around -- and, of course, this is more of the logistics for you guys, but if one gets sick, if two get sick, that starts relying back to one particular boiler attendant other than the security officer who is not qualified to restart the boiler and what have you. Is there anybody else that's going to be qualified under boiler attendant other than the maintenance mechanic and security officer that's listed?

MR. LYTLE: That would be our intent, would be those individuals, maintenance and security, would be in those positions.

MR. BAUGHMAN: What's the contingency if anybody is sick or out and you're down to a limited number of personnel?

MR. LYTLE: We double up our shifts.

MR. BAUGHMAN: Okay.

MR. LYTLE: We had a similar situation, because the crew got hit with COVID and me and Terry Armstrong pulled double duty to make sure that we maintained coverage for not only the hospital but the boilers as well. So it's not something unusual that we haven't had to actually have life experience and live through.

MR. BAUGHMAN: Got you. So you're boing to be listed as a boiler attendant yourself?

MR. LYTLE: Yes.

MR. BAUGHMAN: Okay. Do we need to add that to the list of those personnel type that are listed under the boiler attendant on page 7?

MR. NEVILLE: We can add those, definitely. I mean, I guess, in that capacity, he was, you know, taking the duties of a maintenance mechanic at that time. But we can add him, you know, as well. It's not a position that is common.

MR. BAUGHMAN: You bet. And the reason I ask is because it goes from administrative, being a director, to being more of an attendant to being equipment oriented. And not to talk down on any administrators by any stretch, but I know of some administrators that would not

necessarily be very comfortable in the operation of a boiler attendant. But I take it that Mr. Lytle is going to be qualified under the same training as what the other personnel are. Is that correct?

MR. LYTLE: That would be correct.

MR. BAUGHMAN: Very good. Thank you, Mr. Lytle.

Getting down to the bottom of my list, Mr. Neville. Thank you.

That gets into the hardware.

MR. NEVILLE: Okay.

MR. BAUGHMAN: You describe a remote monitoring system, and we've got that listed under Appendix B, description, which is the Honeywell RM7800, which is a Flame Safeguard programmer. It says it's remotely controlled via the communications interface. I don't see the description of the communication interface. The words "remotely controlled" bothers me somewhat. I don't mind "remotely monitored," but "remotely controlled" is kind of a keyword.

MR. NEVILLE: And it wouldn't be just remotely monitored. You know, there is an e-stop at the remote station. But that's all

we're talking about there.

MR. BAUGHMAN: Okay. In the description for the hardware, it says that the remote or the controls that you've got that are installed or shall be installed are going to enunciate all the different parameters that we need to have enunciated. And it refers to Appendix C for the RM7800.

MR. NEVILLE: Yes.

MR. BAUGHMAN: But nowhere in the 7800 do I see where it enunciates the fault codes for, let's say, low water, primary or secondary. It's got nowhere to enunciate high and low gas switches.

Many other systems, whether it be a Hawk or the others that we look at in the industry, remotely enunciate these conditions. And what we've got here is a flame safeguard programmer that I think we're tying in. I'm just reading between the lines, but I think we're just tying in through the mod bus on this programmer to enunciate the fault codes that the programmer gives.

And I would like to know more about the actual remote monitoring hardware that's used

on this boiler.

MR. NEVILLE: I can get some more information to you on that. But -- let's see what I've got. I'll have to get some more information to you, Mr. Baughman, on that. I don't have that in front of me.

MR. BAUGHMAN: So what we've got is not a complete description, then, of the remote monitoring hardware that's actually with this boiler, other than what the Flame Safeguard programmer is.

MR. NEVILLE: That is correct. At least, what I've listed on the controller now.

MR. BAUGHMAN: The only other question I have, Mr. Neville --

MR. NEVILLE: Yes.

MR. BAUGHMAN: -- is just quantifying the DA, that the DA is not actually a true DA, but it is just an atmospheric feedwater system.

MR. NEVILLE: That is correct.

MR. BAUGHMAN: And just for that, we would identify that in the industry as a boiler feedwater system atmospheric since it's not a true deaerator.

MR. NEVILLE: Okay. On the nameplate, they list it as a deaerator, and that's why, so...

MR. BAUGHMAN: Interesting. Being that they list it as Lockwood lists it --

MR. NEVILLE: Well, not Lockwood. I mean, this is the tag that is on it from the hospital, lists it as a deaerator, so...

MR. BAUGHMAN: I see.

MR. NEVILLE: That's what I took from that, so...

MR. BAUGHMAN: Okay.

MR. NEVILLE: But it is an atmospheric feedwater.

MR. BAUGHMAN: Very good. Thank you very much for that. I appreciate it. Thanks again, very much, for listening and going over some of these questions.

MR. NEVILLE: Sure.

CHAIRMAN MORELOCK: Thank you, Mr. Baughman.

Any other questions or comments from the board members or anyone else on this call? Does anybody have any questions about this variance proposal?

MR. BOWERS: This is Harold Bowers, board member.

The comment I want to make is going into -- back to the security officer, going to Appendix G-2. We're talking about a boiler -- we talk about training for the security officer, a remote station attendant training. We should -- I recommend we should add boiler attendant training to that. So not only does the security officer have the remote station attendant training, he should have boiler attendant training where he knows what to do in a situation and how he can handle emergency situations and maybe a checklist of what he needs to do if something goes wrong. Because you're talking about something going wrong and calling a maintenance guy. And there's sometimes a lot more than just hitting the e-stop. There's certain situations you need to secure the boiler to put it in a safe situation.

And going back to a story of one of my clients -- this is embarrassing, but they had a blow-out near the nozzle. The fire was coming out the side of the boiler three foot, and the security guard, slash, boiler attendant, instead of shutting the boiler down, is looking for a fire

extinguisher. So it's knowing exactly what to do in an emergency situation and how to handle that situation. So if the person is going to be a boiler attendant, he needs to know how to handle emergency situations. That's my comment.

CHAIRMAN MORELOCK: Thank you, Mr. Bowers.

Any additional comments, questions?

MR. BAUGHMAN: Yes. I'll continue, if that's okay. This is Dave Baughman, board member.

So going to Appendix 1, the checklist for the variance request review, for one, I just made a comment that the power piping system drawing that you provided --

MR. NEVILLE: Yes.

MR. BAUGHMAN: -- my glasses weren't quite strong enough without using a magnifier, but in Appendix E, the E-1, I found it a little difficult to track that drawing. And within the other diagram that was below it, I found it a little difficult -- I see existing boiler and then new boiler. I didn't quite get a good understanding of what boilers were which under that drawing, just for what it was worth.

MR. NEVILLE: We listed them as B-1, B-2, and B-3. I don't know if you can make that out. We can make that clearer and we could possibly put that on two sheets and it may improve the readability of that.

MR. BAUGHMAN: I do see that. And that would correlate to Appendix A and the boiler data sheet to Boiler 1, Boiler 2, and Boiler 3.

MR. NEVILLE: That is correct.

MR. BAUGHMAN: Okay. Very good. I appreciate that.

MR. NEVILLE: I guess the text on the first one was kind of small in that regard as well, so we can definitely enlarge that and make that a clearer diagram.

MR. BAUGHMAN: All right.

On the second page, I-2, does the manual include a description of the system that is used to monitor the safety aspects? And it gives Appendix B, the equipment.

But that goes back to my earlier comments about the lack of the actual remote monitoring. It gives us the Flame Safeguard programmer, but it didn't give a good overall view of the hardware that is being utilized and a

description of that hardware. And that follows back over into I-3, the next page. Does the manual include, on Item 19, a description of the computerized monitoring system, the hardware, the remote alarm system?

I know in some other manuals that we have, we actually have pictures presented of the remote alarm system.

MR. NEVILLE: Right.

MR. BAUGHMAN: It gives somewhat of a description.

MR. NEVILLE: Yeah. That has not been installed yet, the remote station shutoff. We're proposing putting that in. It has not been installed as of yet.

MR. BAUGHMAN: When is that proposed installation coming about?

MR. NEVILLE: Mr. Lytle could answer that, as far as the implementation of that remote station.

MR. LYTLE: The remote station has just been installed by Industrial Boiler, and we've tested it and it's functional.

MR. BAUGHMAN: Okay. So to clarify, it actually is installed. But there

again, there's a lack of description. It says, "Does the remote monitoring system prevent unauthorized access?"

The programmer itself just says that it's remotely monitored via the communications interface. The mod bus interface on that RM7800 just gives enunciation, and it has -- there's -- my experience is that remote -- that mod bus doesn't have anything that's -- the programmer itself is not password protected for the standard RM7800. So unless you can produce anything that quantifies this, I'm --

MR. NEVILLE: Right. What I can do is add some pictures now, that the -- when we wrote this, this was back in September of 2020. So the remote station has been installed. We can add some pictures of the remote station and a little more clarification, as far as the hardware interface to it.

MR. BAUGHMAN: Okay. So we're a little bit ahead of the game on this. We're making a proposal back in September or making the submittal for equipment that hadn't been necessarily --

MR. NEVILLE: Well, it hasn't been

installed.

MR. BAUGHMAN: -- installed or procured. But it is now, but we're lacking in that information to review for our own purposes here, is what I'm getting at.

On page I-4, under Item 36, "Does the manual include a test of the systems, the boiler water column, the remote monitoring?"

It itemizes that. It says yes to all of those on page 7 through 9. But in going through page 7 through 9, I would like you to -- unless I've missed it, which isn't unusual, I cannot see where the systems are necessarily tested, nor a direct -- in direct regard to boiler water column. Can you, kind of, point that out to me?

MR. NEVILLE: I guess, under page 7, normal daily duties, Number 1, I guess, under the daily test would be there. We can add some verbiage as far as boiler water column there, but I guess the daily test and the boiler log would be the reference there.

Let's see if we've got another reference to it. As far as -- that would be the location where I would typically have -- but it

does need to be a little more descriptive than the daily test, as far as that.

MR. BAUGHMAN: So on the checklist, the checklist, I guess, what I'm getting at is incorrect. Inasmuch as you reference pages 7 through 9, the 7 through 9 does not include a test of the systems, the boiler water column, the remote monitoring and any others. So I would leave that open to others for any discussion. But I don't see where that's actually in your checklist.

MR. NEVILLE: Well, in our boiler log it shows up, as far as the test.

MR. BAUGHMAN: Right. But it doesn't -- so in your checklist, your boiler -- your checklist for a variance request review --

MR. NEVILLE: Yes.

MR. BAUGHMAN: -- that information under Item 36 is erroneous, being that you reference page 7 through 9. And it is referenced in your boiler log, you say, so --

MR. NEVILLE: Well, I guess we're listing the retained daily tests, and -- on page 7. And so, I guess, it could be clearer, as far as the list of those daily tests in Number 1.

But it shows up on our boiler log, as far as the water column test, so...

MR. BAUGHMAN: Okay. Because 7 through 9 does not really describe any tests. It talks about a radio check. It describes a test of the remote enunciation system, but does not necessarily go over those specific tests. And so they'll be in the log sheet. I want to make sure that the log sheet themselves, which is what, Appendix F?

MR. NEVILLE: Yes.

MR. BAUGHMAN: So the log sheet itself shows power --

MR. NEVILLE: Systems test.

MR. BAUGHMAN: -- test. Which I don't quite know what "systems test" means. It shows water level and steam pressure, so it does qualify some under the systems. Boiler water column, I guess, would be water level, but it's not a true test. And we're going to discuss this further coming up with our checklist information that we're looking at discussing.

But the log sheet doesn't necessarily have anything under -- I guess it would fall under systems test --

MR. NEVILLE: System test monitoring. Right. System test would be -- you know, what would really, I guess, make this clear, as far as on page 7 where I say, you know, perform routine daily test, listed, it's a test of boiler water column -- there's other tests they can perform to check the system and that the alarms are enunciating at the remote station.

But I can add clarification that those tests include the boiler water column.

MR. BAUGHMAN: Okay. I'd just suggest the pages for the references are just for our own end of it. It makes it easy for us to go back to those pages. But I would probably suggest where there is a reference to test, that it actually would say boiler log sheet or see Appendix F, boiler log sheet or something to that extent. Because for me, it takes up the time, then, to go through 7 and 9 and --

MR. NEVILLE: Yes.

MR. BAUGHMAN: -- I'm trying to get clarification.

MR. NEVILLE: I'll make that more concise, for sure.

MR. BAUGHMAN: All right. Thank

you so much, Mr. Neville and Mr. Lytle.

CHAIRMAN MORELOCK: Any other questions or comments?

(No verbal response.)

CHAIRMAN MORELOCK: Hearing none, do I have a motion for this variance?

MR. BAUGHMAN: So I've got -- this is Dave Baughman, board member. I've got something to just bounce off of whether we vote yea or nay on this or whether we resubmit. My feeling on this, Mr. Neville and Mr. Lytle, is that I don't have all the information needed from a standpoint to make a competent decision. And I know that you've said, well, I can get that information to you.

But what we've done is we've made a proposal for this variance before any equipment was installed, and now it's just recently been installed. But I don't have all the information in this manual to make a competent review of what it is that's been installed to be able to vote on it. And so I want to bring that up to see whether or not it's applicable to -- instead of approving or denying, of whether to ask for more information, and resubmittal.

MR. NEVILLE: Just resubmit?

MR. BOWERS: This is Harold Bowers, board member.

Yeah, I kind of agree with what Dave is saying. You know, I would like to see some more stuff added about boiler attendant and security officer. And if we could get that in there, some information before the next meeting.

CHAIRMAN MORELOCK: So, Mr. Neville --

MR. NEVILLE: We can resubmit with that information.

CHAIRMAN MORELOCK: Okay. Mr. Neville, as far as this item, do we want to table this item until the next Boiler Board meeting and resubmit?

MR. NEVILLE: Yes.

CHAIRMAN MORELOCK: Okay. Let me make some quick notes. So Item 21-01 will be tabled and resubmitted for the June Tennessee board meeting. Is that correct?

MR. NEVILLE: Yes.

CHAIRMAN MORELOCK: Okay. Do the board members have any comments or concerns about that? Is that satisfactory?

MR. BAUGHMAN: I think it's good.

And, Mr. Neville and Mr. Lytle, I sure appreciate you going through and addressing these questions and concerns. You did very well, but I appreciate that very much.

CHAIRMAN MORELOCK: Okay. So this item will be tabled for the June 2021 Tennessee Board meeting, and the manual will be resubmitted.

MR. NEVILLE: Yes.

CHAIRMAN MORELOCK: Okay. All right. I'm seeing that we've been meeting for about an hour and 15 minutes, and I think it would probably be prudent to give everybody a ten-minute break before we go to our next item. So let's reconvene at, let's say, 10:25.

(Recess observed.)

CHAIRMAN MORELOCK: So that concludes our new business.

So we're going to go on down to Rule Case and Interpretations. And our first item is BC 21-01. STERIS Corporation requests an exemption from clearance and from boiler attendant requirements for their steam sterilizer installations in the state of Tennessee.

So if everyone will introduce

themselves. And before you do that, are there any conflicts of interest from any of the board members?

MR. BOWERS: It could be on me. I do -- Vanderbilt Hospital is one of my accounts. And we made a -- me and Chris and -- we made a visit yesterday to one of those accounts. And I'm not sure -- but these STERIS units are used all over the country, so I'm not sure -- just because they have it in a few hospitals that we insure, if that would be a conflict or not.

CHAIRMAN MORELOCK: Mr. Bailey, do you have any thoughts on that?

MR. BAILEY: Yeah. I don't think that poses a conflict of interest.

CHAIRMAN MORELOCK: Okay. All right. Thank you, sir.

MR. PURI: I'm sorry, Mr. Chairman. This is Chris Puri. I'm an attorney for STERIS.

We had provided the Board some materials in advance of the meeting with background on a proposal, and we would like to make some remarks. I'm going to turn it over to Ms. LaFrance to walk through the variance request and the waiver.

CHAIRMAN MORELOCK: Very good. Thank you.

MS. LaFRANCE: Okay. Is everyone set? Can you hear me okay?

CHAIRMAN MORELOCK: Yes.

MS. LaFRANCE: Great. I'll just go ahead and read our board inquiry: May a steam sterilizer manufacturer licensed to provide ASME-certified pressure vessels obtain a blanket exemption from the Tennessee side and rear clearance requirements stated in Rule 0800-3-3.04(13)(a) for a particular steam sterilizer model if it has been properly designed to provide front-only access to all components and sufficient clearance for normal operation, maintenance, and its inspection per NBIC Section 4.32?

And our reply is: It is the opinion of the Board, as long as the sterilizer manufacturer in question provides access to all components from the front of the specified model steam sterilizer and sufficient clearance for a normal operation, maintenance and inspection per NBIC Section 4.3.2, that a blanket exemption from the side and rear clearance requirements stated in

Tennessee Rule 0800-3-3.04(13)(a) for that model will be granted.

Now, that's it for the inquiry. I'd like to thank all the board members for taking the time to review our materials and to hear our clearance waiver request for the AMSCO 600 here today.

I'm Marie LaFrance, the senior product manager for a high-temperature sterilizer at STERIS. And today I have with me Roger Andrusky from our service engineering department; Mark Chiffon, our director of R and D; Vito Scotese, who is also from our engineering department; and Sam Watkins, our marketing directer. He's joining us remotely.

We also have a sterilizer available today if anyone would like to see it or if you have any questions. We have all our technical folks here ready to assist. I'll step aside a second so you can see. We're in our customer solutions center and we actually have a sterilizer here that we can take the covers off and show you anything you'd like.

CHAIRMAN MORELOCK: Very good. So I will open it up for questions. I guess, before

we -- do we need a motion to discuss, first?

MS. LaFRANCE: I had some, sort of -- some short comments, if you don't mind.

CHAIRMAN MORELOCK: Okay.

MS. LaFRANCE: Would that be okay with you?

CHAIRMAN MORELOCK: That's perfectly fine.

MS. LaFRANCE: Perfect. Okay.

The AMSCO 600 steam sterilizer was specifically designed by STERIS to meet our customers' needs. As you can see from the letters of support that we submitted from USPI, Benson Method, and AdvaMed. When STERIS develops a steam sterilizer, I would like to assure you that safety is our number one concern, you know. We want it to be safe for operators, service people and inspectors alike, and we ensure that it provides effective sterilization, so it's also safe for patients.

So the AMSCO 600 steam sterilizer was actually designed per the NBIC guidance for full frontal access to accommodate all operation, maintenance, and inspection needs. Our chamber is ASME certified, and the sterilizer has been

cleared for use by the FDA.

When we designed the sterilizer, we focused on critical areas to ensure that all the features were accessible through the front panel only, including the power and control boxes which face forward to meet any steam clearance requirements. The safety valves for the sterilizer and steam generator are easily accessible from the front of the machine for inspection and/or testing.

The generator sight glass is located front and center for easy viewing. The generator heaters are easily removable from the front of the machine. And finally, the sterilizer and generator data plates are all visible from the front of the machine.

Since every component is accessible from the front, additional side and rear clearance really affords no advantage from an inspection and service perspective, and so it does not improve safety.

In addition, there's always going to be sufficient plans in front of the sterilizer because this is the space that is required for operators to load and unload the machine. And we

clearly indicate this on all our equipment drawings.

In summary, this sterilizer design allows hospitals and other surgical procedure sites to maximize space in their sterile processing departments, contain costs, and it significantly increases their capacity to process instruments.

Of course, we realize there's going to be questions. This is a new design and there's going to be some questions by different localities. And where necessary, STERIS has worked with other states to ensure that our customers are able to install these units as we intended.

So I would like to thank you again for your consideration of this waiver request. I really believe it's going to help our customers to meet the healthcare needs of Tennesseans efficiently and effectively. And at this point, I would love to open it up to the board members for any questions you may have.

CHAIRMAN MORELOCK: Thank you very much. What questions or comments do we have from the State of Tennessee and the board members?

MR. BOWERS: This is Harold Bowers. I make a motion to discuss.

CHAIRMAN MORELOCK: Thank you, Harold.

Do I have a second?

MR. BAUGHMAN: Second.

CHAIRMAN MORELOCK: Thank you, Mr. Baughman.

So we have a motion and a second to discuss. So what questions or comments do you have?

MR. BOWERS: This is Harold Bowers, board member. I'm also a boiler inspector.

Yesterday, me and Mr. Baughman and Mr. O'Guin went to a site. Now, we're not -- I think this site had the new unit on there. But the question I have is there's certain information -- in those units, you actually have two jurisdictional objects. You have an unfired pressure vessel with Autoclave. Then you have a high-pressure steam boiler, is the generator. To register those objects, first you have to get your nameplate off your -- off the Autoclave. Then you're going to have to get the nameplate off the steam generator.

Yesterday, the unit we looked at, you could read the nameplate off the Autoclave, which was not in the front. I don't think there's any way possible that you could read the nameplate off the steam generator from the front.

Secondly, you have to -- as an inspector, we have to check the safety valves on those. On the Autoclave, it had two safety valves, and on the steam generator, it had one safety valve. And you have to get that nomenclature off those safety valves to make sure that they match the set pressure of the MAWP of the design vessels.

Also, you have to look at the capacity of the safety valve setting to make sure it meets the capacity of the steam going into that unit. And I don't think there's any way possible -- and maybe they can show us -- they have one, an Autoclave right there -- they can show us how to read the capacity and set value off that safety valve, since they have a unit right there, show us how they can read the nameplate off the steam generator by opening up the front. If they can do that, I'd be more than happy -- they've put together a great presentation here, a

lot of literature.

But I have to -- usually, we have to see it actually happening, not on paper. Because we're the ones who are going to have to crawl on the floor and try to get that information. We have to have that information to submit a correct inspect report to the State of Tennessee. And Mr. O'Guin can verify that. And he was with me yesterday. Thank you.

MS. LaFRANCE: Okay. So we'll have Mark Chiffon and Vito show you what's on the sterilizer. Mark is going to share his screen on his phone so that we can use his phone as a camera so you can see the sterilizer.

Mark, do you have voice?

MR. CHIFFON: (No verbal response.)

MS. LaFRANCE: Mark, do you want me to hold the phone and you can explain?

MR. CHIFFON: If you want.

MS. LaFRANCE: Can you-all see the safety valves on top of the machine?

CHAIRMAN MORELOCK: Yes.

MR. BOWERS: Yes.

CHAIRMAN MORELOCK: Very good.

MS. LaFRANCE: Mark is going to

describe what you're seeing.

MR. CHIFFON: So we have a separate safety valve. There's one on the sterilizer chamber, and there's one on the sterilizer jacket. So we have two steam supplies coming to this system, so we have two safety valves that are located on the vessel. So these are the two safety valves that are on top of the vessel that are used to protect it and are rated for the appropriate flow through the system and the pressure.

MR. BOWERS: Can you show me the National Board plate on the Autoclave?

MR. CHIFFON: The National Board plate? Yes. Yes. So this is the National Board plate. These pressure vessels aren't manufactured by STERIS. This is the information that we have. They're all rated to the same values. So it's a family of sterilizers. It's the AMSCO 600. There's three different links that we sell this as. And we could have one door in the front or we could have sterilizers with a door in the front and a door in the back.

But the pressure ratings are all the same. The materials of construction are all the

same. And the manufacturing and welding of the systems are all the same.

MR. BOWERS: This is Harold Bowers, Boiler Board member.

So you're saying, on these sterilizers, not only would the inspector have front access, they would have rear access. But they would not have side access; is that correct?

MR. CHIFFON: We have sterilizers with a single door or a double door. The sterilizers with a single door, we would have access from the front only. The sterilizers with two doors, you would have access from both ends of the sterilizer.

MR. BOWERS: Okay. Moving on to the steam generator, can you get to the National Board plate on the steam generator?

MR. CHIFFON: Yes. Also, that steam generator is an option. So there are some sterilizers that will have the steam generator and some sterilizers that will not have the steam generator. So we have that option from that standpoint.

So we have looked at mounting the plate on the system. I think some of the very

early ones we had the location in other places. But we've since --

MS. LaFRANCE: This is a prototype machine that we have in our customer visitor center, so it doesn't have the data plate for the generator on it, but we're going to show you the location -- we'll show you the plate and the location that it will be.

MR. CHIFFON: So the plate is mounted on the front of the generator next to the electrical box. And it's going to be right behind the panel in the front. So that's also removable in order to be able to see that particular data plate.

MR. BOWERS: This is Harold Bowers, board member.

See, that would be imperative. It has to have that plate visible from the front even to register that unit.

Now, let's go on to the safety valve on that unit.

MS. LaFRANCE: Okay. Let me get a picture up here for you.

MR. CHIFFON: Safety valve of the generator?

MS. LaFRANCE: The safety valve of the generator.

These phones are great tools.

MR. CHIFFON: It's not working yet. There you go.

MS. LaFRANCE: Okay. We're not focused, but that's the valve. Okay. We were frozen a bit.

MR. CHIFFON: So that's the relief valve that's located on the steam generator.

MR. BAUGHMAN: This is Dave Baughman, board member.

Can you pan back from the unit itself, from that relief valve, instead of having it up inside, to show us the location, please?

MS. LaFRANCE: It's just catching up. There it is, right there.

You can move your arm, Vito.

MR. BOWERS: Harold Bowers, board member. It looks like the safety valves are pretty clear. The nameplate for the Autoclave looks to be in a good location. I guess my main concern would be the National Board plate on the steam generator itself, as far as for inspection purposes only.

MS. LaFRANCE: Right. Well, the reason it's placed where it is, is because it's supposed to be -- it's my understanding it's supposed to be on the pressure vessel, so that's the reason it is where it is.

MR. BAUGHMAN: Dave Baughman, board member.

Would you pan to the sight glass, please, the water level sight glass?

MR. CHIFFON: (Complies.)

MR. BAUGHMAN: Very good. So what I was looking at was where this sight glass ties into the boiler itself for good means of equalization and the accessibility for checking those ports for cleanliness, for plugging up and so forth. So I see -- I guess I'm trying to get -- so when we looked at this the other day at the job site, one of the main issues I had was the water in the sight glass was full, and the sight glass valves were shut, which is not --

MR. CHIFFON: Correct. Correct.

MR. BAUGHMAN: -- per operational design code itself. What I was looking at was means of being able to clean the sight glass or drain the sight glass. And what we've got is a

gauge that's mounted at the bottom of the sight glass instead of any kind of apparatus to drain the sight glass itself. Of note, also, it was a heavy-wall sight glass, but it did not have any writing on it pertaining to Duran or Shotz or any of the manufacturers that manufacture a rated high-pressure glass. And so, made notation of that, that the glass did not have the appropriate writing on it.

MR. CHIFFON: Yeah. We did receive some information on that early this morning. And it is, in fact, the correct glass. We need to make sure that we supply the correct information with the unit regarding the glass.

MR. BAUGHMAN: Okay. Is the gauge down there at the bottom what we're using for pressure?

MR. CHIFFON: Yes.

MR. BAUGHMAN: Interesting. Okay. So there's no means of testing that gauge, which is a requirement. We need to be able to check the accuracy of the steam gauge. The steam gauge itself has no shut-off. It just is a gauge that's coming off the bottom of the sight glass assembly itself, correct?

MR. CHIFFON: Yes.

MR. BAUGHMAN: Okay. Going back to the relief valves -- and thank you for this. Going back to the relief valves themselves, let's start with the jacket and the chamber up on top.

MR. CHIFFON: Uh-huh.

MR. BAUGHMAN: So the boiler name tag itself or the chamber itself, the unfired section, is rated in kilopascals. Being that I can't read the nomenclature on the relief valves, what is the relief valve set pressure for each one of those?

MR. CHIFFON: It's 36 psig on the jacket and 45 psig on the chamber.

MR. BAUGHMAN: So the chamber comes out, and if we're using 0.145 kilopascals per psi -- and it was rated at, what was it, 300-and-something for the chamber?

CHAIRMAN MORELOCK: Yeah. I think that's in kilopascals, 300 kilopascals, roughly, right?

MR. BAUGHMAN: Yes. I think it's 310 kilopascals.

CHAIRMAN MORELOCK: That's going to put you around 45 -- that's going to put you at

45 psi, right?

MR. BAUGHMAN: 44.95, yes.

CHAIRMAN MORELOCK: Oh, okay.

MR. BAUGHMAN: So I guess my question being is, for one, just making sure that we are at or below -- I noticed that we've got an aperture in the weep hole of the relief valves. I've not seen that aperture before. Could you describe what that red, for lack of a technical term, doohickey is on the side of the relief valve?

MR. CHIFFON: This is a unit that we have in our CSC center. It's not functional, I'll say. We have a program that will simulate running cycles on it. It's not connected. These are just plugs for those holes. They would be removed. It's just it's part of the packaging we get from the vendor.

MR. BAUGHMAN: Okay. Packaging from the vendor. So the vendor is yourself, STERIS --

MR. CHIFFON: The vendor of the relief valves.

MR. BAUGHMAN: Interesting. Okay. We supply relief valves from our shop, and we

haven't ever had anything like that in the weep holes of the relief valve itself. Those that you have are Apollo Conbraco series, and we don't have that. But --

MR. CHIFFON: Yeah. I haven't seen these in any other safety valves that we get that are also from Apollo. I haven't seen them either.

MR. BAUGHMAN: And I would just say, being that, you know, we're looking at this to analyze it and we're seeing some things that are different versus in the field -- what we saw in the field did not have those, by the way. But what they did have was the discharge piping off of the side of the relief valves, both on the chamber and jacket for the unfired section. And off of the boiler itself, it had the discharge piping, which looks to be factory piping; is that correct?

MR. CHIFFON: Yes.

MR. BAUGHMAN: Well, just a note that we made, that piping is not supported, and that piping is coming off of the relief valve and is quantified to go to a safe point of discharge. And the sides of that unit itself, the relief valves go over and down, both for the jacket and chamber and on the steam generator itself comes

over and down, not to what I would deem a safe point of discharge, nor is that piping supported as by requirement of the relief valve manufacturer and by code.

So for your own information, the discharge piping does not meet the letter of the code as it is being built.

MR. CHIFFON: Okay. Thank you.

MR. BAUGHMAN: You're welcome.

So panning back to the unit itself -- thank you much for taking the time on this, all of you. But panning back to where you're looking at the front of the unit as you walk up and you're needing to service that unit, i.e., as I was going through the manual, it's giving particular checks for this unit, and it's giving checks such as check the steam gauge once per year; check the water level once per year. And this is on a high-pressure steam boiler. I find that -- I find that rather -- and this is in the maintenance manual for the AMSCO 600 series. I just found that length of intervals rather lacking for a high-pressure steam unit of any manufacturer. Would you not agree?

MR. ANDRUSKY: I'm Roger Andrusky,

field service engineer for STERIS. If I understood you correctly, we have an inspection that our field service folks do just for units that are equipped with a steam generator. We actually inspect those four times a year. The inspection list that you're looking at there is what we call IBCL. It's for our customers. It's an internal customer inspection list that we recommend they do. In addition, we do the four inspections per year on a quarterly basis. We call those a PMCL. It's a -- rather than an IBCL. It's a preventative maintenance checklist.

MR. BOWERS: This is Harold Bowers, board member.

Is the steam -- is there any way the steam goes to the electronic system where it monitors the steam flow?

MR. ANDRUSKY: To monitor steam flow?

MR. BOWERS: Steam pressure in the unit itself. Is there any way in the system it does that?

MR. CHIFFON: Yes. There's a pressure transducer that's on the sterilizer. We use that to control the cycle in order to provide

the proper parameters to sterilize the product. So there's temperature monitoring on the system, as well as pressure monitoring on the system.

MR. BOWERS: Thank you very much.

MR. CHIFFON: You're welcome.

MR. BAUGHMAN: This is Dave Baughman, board member.

In looking at the unit itself, both on site and through the video that you just showed, does that unit itself that you have at your customer center have access from the rear?

MR. CHIFFON: Yes.

MR. BAUGHMAN: And just from a maintenance standpoint, being a boiler man myself, I know if I was being called in to, let's say, change the motor or do any kind of maintenance on that unit itself for service, I think that any of us here, whether it's -- well, for anybody -- but when you're going in to work on that unit, it would be so much easier to have access from the rear of that unit, would it not be?

MS. LaFRANCE: I don't agree, because the unit was designed to be serviced from the front. So all of the components are up towards the front. And Roger was part of the team

where we had service individuals come in on a periodic basis to make sure that everything could be accessed, everything was within arm's reach. So I don't think there's any advantage afforded by having the rear service access.

MR. ANDRUSKY: And one thing I would add to that, for example, with the vacuum pump, one of the larger things that we have to service, that vacuum pump plate has a wheel at the back of it that once we take the unions off, we can actually pull the whole vacuum pump assembly out the front to work on it if we need to if we don't have -- if there isn't access in any other area. The generator is the same way. It also can be completely pulled out the front if necessary. It is not on wheels, but if we have to unscrew it, then it can be removed.

MR. BAUGHMAN: Sure. So -- and in speaking with a gentleman that does some maintenance work with STERIS, asking his opinion on it, he declared it as a very difficult proposition, that it's not an easily accessible unit.

We've been involved even on units in the field that did not have the steam generator

where the service technician from STERIS mandated some equipment be moved in order to work on the vacuum pump itself. And so what I'm getting at is that -- what this all comes down to is space. We want to put as much equipment into a small amount of footprint as possible. That's kind of the bottom line of what the discussion is about is floor space. And what we're looking at is the safety component of, just like with the sight glass yesterday, that people that were operating -- and this unit was already in operation, but yet the sight glass valve was closed. The people that are looking over this high-pressure piece of equipment, which literally has the expansive power of dynamite, are the nurses. And the comfort level in these personnel of operating this piece of equipment, let alone knowing what to do if there's a sight glass rupture, knowing what to do in any case, there was the lack of operating expertise themselves, let alone the lack of a warm fuzzy.

But in looking at it from the operation inspection standpoint, what you've got there at your service center, doesn't even have the tag. We're saying that the tag is going to be

mounted up front and so forth for accessibility. But it's people like Mr. Bowers, Mr. O'Guin, Mr. Robinson, others in this industry, that have to have good accessibility in to look at these units. And I know that when we looked at the relief valves yesterday, it was very difficult to get the information off of those relief valves.

The other item I noted was there was no manufacturer's data report that was available for this particular vessel itself. And the manufacture's data report is a requirement for the permitting of the installation of the equipment, but yet it was lacking. And so that's an integral component of selling these units, installing these units and so forth --

MR. ANDRUSKY: Those documents are shipped with the equipment and given to the customer. I don't know, in that case, whether we inquired from the customer, you know, whether they were available or not. STERIS doesn't keep them. The technicians can't keep them. They're given, like I said, as customer documents. And if they're not available, we can get them readily from our manufacturing source.

MR. BOWERS: This is Harold Bowers,

board member.

Yeah, this unit here, looking at it, looks maybe a little different than the one we looked at yesterday. Because this one here can be more easily accessed. But the problem is, like Dave said, if that bottom nameplate -- let's say this was to come into the state and the initial inspection was to be done, and the state inspector comes in there and he could not read that nameplate, he would not pass that. So then you've got a situation where, hey, you have a sterilizer sold to a customer that cannot be registered in the state because that state inspector could not get to that nameplate.

Now, another question I have, I'm sure this whole unit slides in from the front and can slide out from the front, correct?

MR. ANDRUSKY: The individual components, you mean? Yes.

MR. BOWERS: The whole unit is, actually --

MR. CHIFFON: Yeah. It's installed from the front.

MR. ANDRUSKY: Yeah. It's installed from the front.

MR. BOWERS: So any major repair, that unit can be, actually, slid out and worked on, correct?

MR. ANDRUSKY: Technically, yes.

MR. BOWERS: Yeah. Say you had it repaired and say you had to replace somehow, on the pressure vessel side, you had to have it repaired, you had a leak, this whole unit could actually be pulled out. You probably would pull it out and replace it, but you could also pull it out and repair it if you had to, correct?

MR. ANDRUSKY: Yes.

MR. BOWERS: Okay.

MR. O'GUIN: Chris O'Guin, assistant chief.

The main concern I have with this unit -- I mean, the Autoclave, you know, we can inspect it. I see that. The steam generator, however, you can't see the right side of the vessel. All you can see is the left side.

In the past two weeks, we have safety red-tagged two steam generators similar to this setup that were blowing steam out the vessel themselves. If all you can see is the left side, say it's blowing steam out the right, if it's

noisy and you can't hear it, you're not going to know it. Especially, if you can't get around to the side to do a proper inspection.

MR. ANDRUSKY: That would be true for a cabinet unit as well. A unit that is sitting in the middle of a floor that has a full cabinet around it, you would have the same thing. The indication would be that you would see a leak on the floor somewhere that would have to be identified and repaired.

MR. O'GUIN: But you can't see the floor from looking at the front of this unit. If you have no rear and side clearance, how are you going to see the floor beside the steam generator? How are you going to see if that steam generator relief valve is leaking?

MR. ANDRUSKY: I'm sorry, sir. I didn't hear you.

MR. O'GUIN: How are you going to see if that vessel is leaking on the right side, or how are you going to see that the steam generator relief valve is leaking, since all you're going to be able to read is the data itself on the relief valve from the front access only? I'm going strictly by your board case, front

access only.

MR. ANDRUSKY: I'm not sure we ever had the issue. It would be true with any other installation that's -- when it's in the utility room. The operator would not necessarily see a leak. They would eventually. So I'm not sure that this is any different.

MR. O'GUIN: Okay. You answered my question. Thank you.

CHAIRMAN MORELOCK: Mr. Toth?

MR. TOTH: Thank you, Mr. Chairman. I do have a couple questions and a concern. Number one, the -- with my experience, as a former inspector, we used to have the mechanical rooms behind. I know, just like Mr. Baughman said, we're looking at trying to save space. It's all about real estate. I get that.

When the code comes out and talks about clearance, what they're referring to is, again, the ability to save space, not for inspections. The inspections are not taken into consideration. This is something that we've battled for years. We even have board cases, such as 06.3, that take into account things like wall-mounted heaters, so on and so forth. But

with Assistant Chief O'Guin, I had wrote the note down and he brought it up to mention was -- the question I have is if you can pull that unit in and out, as Mr. Bowers alluded to, the response was yes, you can. Okay. Can that unit be pulled in and out during the time of inspection?

MR. ANDRUSKY: No.

MR. TOTH: No. So once it's in there, it's in there until you say, okay, something is broke, now we're going to pull it out.

As Mr. O'Guin mentioned, hey, we can see the Autoclave. Yes, you can open the door, you can check the door, you can check the inside surfaces of it. You can check the outside surfaces. You're going to have corrosion that's going to be on the inside. I get that. That's fine. But I also agree that you're not getting a full inspection.

Are all of these units that come with a steam generator just electric?

MR. CHIFFON: Yes. The steam generator is electric.

MR. TOTH: No gas? Just electric.

MR. CHIFFON: No.

MR. TOTH: Okay. So you would never have a situation where you would put one of these into a unit and have a client say, hey, I need a gas steam generator. I don't want electric. You would say, sorry, we can't handle that.

MR. CHIFFON: That's correct.

MR. TOTH: Okay. So again, you get to the situation where yes, if you have a leak on a relief valve, okay, that's fine. You've got a relief valve leaking and it's relieving pressure; however, if you don't have the ability during an inspection to actually look closely and find these situations, look and be able to see the side of the pressure vessel, because the steam generator -- am I correct? -- that it has a pressure vessel, or is it a coiled unit?

MR. CHIFFON: It has a pressure vessel.

MR. TOTH: Okay. So if you have a pressure vessel, how is that inspector going to be able to get in there and to have a close look at that pressure vessel? Again, servicing the unit is one thing. Inspecting the unit is completely different. And so when you start looking at those

two, you've got to take into account -- and again, I don't have a dog in the hunt. I'm not an inspector anymore. I'm a consultant. But I feel for these guys that have to do their job and do an inspection.

My last point, to speak of the data plate, there are provisions within the code that you can have a duplicate data plate. Okay? If these units are -- you put the original data plate on the actual pressure vessel, and you can put a duplicate data plate on its mountings. That is no problem. So, in essence, you can literally put that anywhere.

The last thing that I have to say is I'm concerned with the controls and safety devices being inspected on units like this, and, also, being tested.

And with that, I will mute out. Thank you.

CHAIRMAN MORELOCK: Thank you, Mr. Toth. What other questions do you have?

MR. BOWERS: Yes. This is Harold Bowers, board member.

I want to just make one comment, going back to what Mr. O'Guin was saying. It was

about the pressure relief valves. We can look at the top of the pressure relief valve, but with the safety relief valve, with the piping going down the side, as an inspector, we would have no way to know if that safety valve was leaking through or having a leak through it. And we couldn't actually see, because we can't get to the back of the unit and we can't see if the bottom of those safety valves or bottom of the piping off the safety valves if any -- with steam coming out or a little water coming out of there.

And so I think Mr. O'Guin made a good point of that, knowing if the safety valves are leaking by.

CHAIRMAN MORELOCK: Mr. Toth?

MR. TOTH: Yeah. The one last thing I had a note on, we were talking about kilopascals and psi. When you construct a unit to the code, everything within that code has to stay within the standard measurements. Okay? So if we're going with the metric measurement and going back to a standard, imperial or something like that, they all have to be the same. So you can't have a safety relief valve in psi and have the unit in kilopascals.

CHAIRMAN MORELOCK: That is a true statement.

The steam generator, it's ASME code-stamped, correct?

MR. CHIFFON: Correct.

CHAIRMAN MORELOCK: And is it --

MR. CHIFFON: An M-stamp.

CHAIRMAN MORELOCK: Is it a miniature boiler?

MR. CHIFFON: Miniature boiler, yes.

CHAIRMAN MORELOCK: Okay. All right. Thank you.

MR. CHIFFON: And the chambers, the sterilizers are U-stamped, unfired pressure vessels.

CHAIRMAN MORELOCK: Okay. Thank you. Very good. The reason I ask the question is your inquiry and your reply reference NBIC Section 4.2.3. And there are four books in the NBIC, part 1, part 2, part 3, and part 4. And so part 3 is repairs and alterations; part 4 is relief devices; part 1 is installation; and two is inspection .

And so your inquiry would need to

reference part 2. And then by referencing Section 4.3.2, that is for clearances for pressure vessels only. If you are going to try to reference the steam generator, you will have to go back to boilers, which is 2.3.3. So just a -- kind of a point of clarification of your inquiry and your reply. Because you do have a Section 1 vessel and a Section 8 vessel.

Yes, Mr. Toth.

MR. TOTH: (No verbal response.)

CHAIRMAN MORELOCK: You're muted.

MR. TOTH: Yes. I didn't start talking yet. I was trying to find that button. Sorry to keep interrupting.

But so BC 98-03, actually, already exists. So their board case request, in my opinion, should only regard the steam generator because they already did -- there's already a board case out for unfired pressure vessels. It would have to be massaged for -- in the case of the clearances that are within 98-03. You may want to look at that. So -- I don't know -- just take a look at that and make sure that you're not duplicating yourselves on it or contradicting yourselves. Because 98-03 is going to, you know,

cover those low-pressure units and, also, unfired pressure vessels. So take a look at that and make sure that you're not contradicting yourself.

CHAIRMAN MORELOCK: That's a very good point.

MR. BAUGHMAN: This is Dave Baughman, board member.

Do we have access to look at 98-03 while we're here? And the other question is what's the cubic feet of this particular unfired vessel? What's the cubic foot of volume that we have? I'll leave that up to Marie or --

MS. LaFRANCE: Let me get my calculator out.

MR. BAUGHMAN: Sorry I asked you to do math on a Wednesday.

MS. LaFRANCE: Yeah. It's my forte.

MR. BOWERS: This is Harold Bowers, board member.

The one we looked at yesterday was definitely over 5 cubic foot, so I'm pretty sure it's going to be over 5 cubic foot. And going back to what Marty was saying, you're almost treated -- some of these that -- I know I've

looked at many units that you have that run off plant seam, don't have a steam generator. So those are almost treated differently than the combination units for clearance, I think, if we already have a board case that deals with the units that don't have a steam generator.

MR. BAUGHMAN: Again, this is Dave Baughman, board member.

This inquiry is specific to this AMSCO 600. So we're not taking a blanket for other units, from what I'm understanding in this inquiry. It is specifically for this particular unit itself. Is that correct?

MR. CHIFFON: That's correct, yes. Yes. We make a lot of other sterilizer models, but we're only asking for the AMSCO 600. It's about 25 cubic feet, on the largest size.

MR. BAUGHMAN: Thank you for that.

CHAIRMAN MORELOCK: What other questions or comments do you have?

MR. TOTH: Mr. Chairman?

CHAIRMAN MORELOCK: Yes, Mr. Toth.

MR. TOTH: To Mr. Baughman's point, if this is specific to one unit, I would suggest that it's not a board case. I would suggest it's

a line item that is looking for a special approval or waiver because the board case interpretations are broad sweeping.

CHAIRMAN MORELOCK: That's correct.

MS. LaFRANCE: I'm sorry. Can you repeat that? It's not a board case but what? A line item.

CHAIRMAN MORELOCK: It would be seeking a variance just for that specific unit.

MR. WATKINS: This is Sam Watkins from STERIS. Would that have to be done at each and every installation or would this be something that we would have this exception or variance so that we can plan in advance? And I'm asking this because normally we're -- before a hospital even breaks ground, we're working with architects and planning out the design of these units. And, you know, we wouldn't want to get two years later when it's time to install to have someone come back and say, you know what, we changed our mind, something changed here, you can't do it anymore. Because it wouldn't be STERIS footing the bill; it would be HCA or Vanderbilt having to spend significant money to redesign everything.

So just can you walk us through what

that process would be like and how that is impactful?

CHAIRMAN MORELOCK: Well, I mean, if you're only looking at the 600, that's pretty specific.

MR. WATKINS: Right.

CHAIRMAN MORELOCK: And so you would get a variance for that specifically, and if there's another unit similar to it, it would not be covered by that variance. It would only be specifically a variance for your specific product.

MR. WATKINS: Which is fine, and that's -- they're, you know, specifically designed. One will say the AMSCO 600 and one will say the 400. There's no way that that would be -- that would be missed. So that works.

CHAIRMAN MORELOCK: So, I mean, you know, there's other products out there that we have similar comments and questions about, like, instantaneous water heaters, being one example. So it's either a broad brush that we would have a board case that any unit that would fit the parameters in that board case could use the board case, or you get a specific variance just for your STERIS 600 product.

MR. WATKINS: Is that just done with, like, a -- is it a document or is it filed on the website that we can reference?

CHAIRMAN MORELOCK: The board cases and interpretations are published on the website, that's correct.

MR. WATKINS: Okay.

CHAIRMAN MORELOCK: A variance that specific would probably be only published to you.

MR. WATKINS: Okay. That's perfect. You know, we're going to have to go back and talk to our -- the architects and project design team so we have a response to give them. That works. Thank you.

CHAIRMAN MORELOCK: You're very welcome.

MR. BOWERS: This is Harold Bowers, board member.

Now, Brian, would that be a lifetime variance, or would that be subject to the expiration on that?

CHAIRMAN MORELOCK: It would be subject to any design change and that unit would have to come back to the board, or something similar to that. Correct? Wouldn't you agree?

MR. BOWERS: So if they ever come up with the 600 Alpha or 601, then they would have to come back to the board to --

CHAIRMAN MORELOCK: If it was to -- if it was going to change the parameters that you're giving the variance for, location of relief devices, the size of the steam generator, the different size sterilizer. I mean, you know, without getting into the technical weeds on this -- but it would have to be -- it would have to be a minor change wouldn't impact the intent. That's why you would have the variance, which is are you going to allow certain clearances for this installation and still be able to inspect the unit and maintain the certificate of inspection on this vessel or vessels.

Mr. Toth?

MR. TOTH: Yeah, Mr. Chairman. Thank you.

When I brought it up about having a line item versus a board case, it's not unprecedented to, within a request, to put a brand name. There's board cases that are out there that will mention things like a Clayton steam generator within their request. So that's not

unprecedented.

So what I'm saying is that me, personally, I would recommend that you handle this as a board case subject, again -- going back to our code lingo, Mr. Chairman -- subject to the Boiler Unit's approval during permitting. Again, you can highlight, if you choose to accept this particular design -- which I'm not really in favor of, but that's my personal opinion -- you could put this particular unit inside of the request, respond back with yes, if you agree, subject to review at time of permitting.

What that does is if somebody comes in with a unit that has not been reviewed, they're not familiar with it, the Boiler Unit could have the opportunity to deny that particular unit.

This -- STERIS has come in with a wonderful presentation, from everything I'm hearing. That's great. ABC company comes in trying to piggy-back on top of this board case and does not supply that initial documentation. Maybe the Boiler Unit decides to request some additional information.

That's my opinion from my experience with these type of things. It's really up to the

Boiler Unit to say yes, you can use this board case because you're following everything that was involved with creating the board case. Again, that's my opinion. Thank you.

MR. PURI: (Indicating.)

CHAIRMAN MORELOCK: Yes, Mr. Puri?

MR. PURI: Yes, Mr. Chairman. Just one question from a process standpoint. If there was a variance, line item variance required for STERIS for either the installation or the unit, that particular unit overall, is that an item that the Board can hear remotely? Because I think one of the challenges has been this request has sort of been pending for a year and hasn't been able to be put on the agenda. So that was the other question, is procedurally, does that need to be heard in an in-person meeting, or is that something that the Board entertains -- should you require that -- entertain in a remote meeting? Which hopefully we don't have for very much longer, but for the foreseeable future, we probably do.

CHAIRMAN MORELOCK: Well, I guess, to speak to your concern, maybe a little frustration, due to the backlog of variances that

the Board needed to see in the midst of COVID-19, the State of Tennessee -- and we supported it -- is we were only taking up business items that was to prevent people from shutting down pressure equipment and not being able to operate. So whether it be a boiler variance or a system manual review, things like that, we were handling only those items.

And so we do want to thank you for your patience. And so to answer your question, you know, I really hope we -- our next quarterly meeting, I hope that we are able to do that face to face. But if not, it will be a Zoom meeting.

Also, one of the things that we come away from with COVID-19 is that this architecture to have an online meeting, like we're having right now, it's not ideal but it does work.

And so, you know, we've had emergency-called meetings for board cases and things that was going to shut somebody down. And we've had face-to-face emergency meetings like that. We could do a Zoom meeting like that as well. So we do have options. It's not -- we don't make it commonplace, obviously. We want to stay on that quarterly meeting cycle. But as

people who are trying to make a living and improve the economy of Tennessee, we're going to step up and try to help them do that. So did that clarify your question?

MR. PURI: Yes. Thank you. I didn't mean to express frustration. It was just a matter of seeing how we should work the process, depending on what the Board does.

CHAIRMAN MORELOCK: Okay.

All right. What other questions or comments do the board members or visitors have?

MR. BAUGHMAN: This is Dave Baughman, board member.

I have a couple more comments.

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: Thank you so much for this discussion. The way that I've looked at the unit itself, as it stands, there's items that need to be corrected, i.e., the piping of the relief valve; looking at the steam gauge, having a valve to shut the steam gauge off, having a means to be able to test the steam gauge. Some of the installation of this steam generator itself doesn't quite meet what it should. I'm interested in the blow-down of this unit itself, where the

blow-down goes, how the blow-down is accomplished. Because from the backside, we saw accessibility to a drain. But I'm interested, from the perspective of those attending the meeting here, how is that unit blown down and how are the components, i.e., the operating pressure, the high-pressure limit, the backup for it, and any low-water cutoff apertures, and the blow-downs, how are they accomplished?

MR. ANDRUSKY: When you speak of blow-down, do you mean just a flush and drain?

MR. BAUGHMAN: Yes, sir. So just blowing down the unit itself from a sediment standpoint and the ability to check the -- I take it this unit has a low-water sensor on it; is that correct?

MR. ANDRUSKY: Yes.

MR. BAUGHMAN: How is that able to be checked and how do we actually blow the unit down at pressure?

MR. ANDRUSKY: Well, we don't blow the unit down at pressure because we put the high-temperature output down the drain, which is not what we'd typically do. If we blow it down, we do a flush and drain, it's with a cold-water

flush.

MR. BAUGHMAN: Okay. How do we -- so you said not typically. But that word "typically" leads me to believe that there's an untypical operation.

MR. ANDRUSKY: No. And I apologize for that. We have a -- on larger generators, like our standalone generators, there's a blow-down system that we actually blow down into a tank. And that's what I was referring to in my mind. That's a completely different system, obviously. It's just a separate -- a completely separate boiler.

MR. BAUGHMAN: Very good. So we're flushing this not at pressure but just flushing the system out. And I take it that's set up on an automatic control type of mechanism.

MR. ANDRUSKY: It can be with the auto flush system that's available. It's an option on the machine, but because it's an RO system, it doesn't typically need to be flushed down on, I'll say, a regular basis when you consider, I'll say, a non-portable water system, which would always have a flush-and-drain on it. And yes, the auto flush-and-drain is a kit that

can be installed as an option.

MR. BAUGHMAN: Okay. How would the inspector test the low water, and how would he test the high-pressure limit?

MR. ANDRUSKY: I don't know how they do that, to be honest with you. The generator can be charged. The upper limit on the upper pressure switch is set to 90 psi, and the operating is 75 and 80. So they're at 75 on and 80 off. We don't do a high-pressure test. STERIS didn't do a high-pressure test.

What would the inspector expect to be able to do?

MR. BAUGHMAN: I'll defer that to my inspector brothers.

MR. CHIFFON: Yeah. One thing to mention is this is a stainless steam generator and it uses our deionizer distill. There's some type of treated water per use, so we wanted to keep a clean system and eliminate the scale and buildup of the steam generator. So we require a certain water quality to run.

CHAIRMAN MORELOCK: Very good.

Mr. Toth?

MR. TOTH: Just I get the whole

reverse osmosis, deionized, things like that, but there is potential corrosion. From my understanding, when Mr. Baughman and the assistant chief and Mr. Bowers went and did their site view, did you see sediment in the sight glass, Mr. Baughman, would be the question? Go ahead.

MR. BAUGHMAN: Actually, at first look, we could not view sediment as the sight glass valves were actually in the closed position.

MR. TOTH: All right. And so I guess the concern that you have is you still need to blow these units down. As the inspector, you still need to blow these units down. These units need to be blown down in a pressure environment by the inspector. The inspector is not going to sit there and wait for this unit to cool down so that they can actually witness this.

Also, it's a little concerning, number one, that you, as a manufacturer, don't know the process. I think you probably would if you asked somebody else within your industry or within your company. But you need to test things on a regular basis. And to answer that question that you had, how would the inspector do these, well, doing these tests -- again, they're trained

in this -- is by adjustment of the controls so that the unit would, in fact, trip the unit off at a certain pressure. For example, if you're running at -- and I'm just saying because I heard the number 45 psi -- if you're running at 45 psi, you're going to then manipulate those controls so that it would trip that boiler once you go down to that 45 psi.

So those are the type of things that you are going to do that do need to be done on a regular basis.

MR. ANDRUSKY: The systems are tested on a -- well, the generators, especially, are tested four times a year. Between the preventative maintenance checklist, we operate the machine through the service mode. The valves, the flush-and-drain valve, when it's installed, it can be controlled from service mode. So the valve can be opened and the unit is flushed down manually.

We don't do what, again, is a high-pressure -- with high pressure because of the limitations of the drain. If the drain has PVC, we can't exceed 140 F.

MR. TOTH: Right. But then, by code and what code calls out on the high-pressure

boilers is that you would send that drain for a blow-down separator -- that blow-down separator, that's the main purpose for that -- or into an open tank that would pull that blow-down before it goes to drain, as you mentioned with your larger units.

MR. BAUGHMAN: Again, Dave Baughman, board member.

What I was getting at was when Mr. Bowers, Mr. Robinson, Mr. O'Guin, any of these inspectors go out, they're not familiar with the unit. And so there's going to be, on this high-pressure unit typically two inspections a year, one internal and one external. But the problem with it is, is that we need to have good knowledge of the working apertures on this unit itself to test them, and they need to be tested out.

So my concern with it is, is how we're doing the low-water checks, how we're being able to know about the pressure settings, corroborating that with the pressure gauge, which has no means of being able to test the accuracy right now of the unit, the gauge itself. So I've got some issues with how this unit is actually

installed, the relief valve, discharge piping, where it's piped to, how it's not supported.

So I think there's some things that I would want to see addressed, whether anybody wants my input or not. I'm just saying that from the design standpoint of this unit, it doesn't actually meet the code of the day. The pressure switches are set in psi again to where the boiler is rated in kilopascals.

Mr. Toth alluded to that earlier, is that they all need to be one system or the other. But as it stands presently, it's not. So --

MR. CHIFFON: I think the -- excuse me. I think the chamber is rated at kilopascals, but the boiler, the generator, is psi.

MS. GEORGE: Excuse me. We see two men on the screen. The name says Marie LaFrance, but there are two men in masks. So if you guys could please just identify yourself before you speak, we'd appreciate it.

MR. CHIFFON: Okay.

MS. GEORGE: Thank you.

MR. ANDRUSKY: That was Mark Chiffon. I'm Roger Andrusky.

MR. O'GUIN: Chris O'Guin,

assistant chief inspector.

Mr. Baughman, we did get the permits in on those two vessels that you and I and Mr. Bowers went and looked at on Monday. So that inspection will be performed probably tomorrow. I know Mr. Strickland had planned for it to happen this week. He will not pass that vessel if he can't blow it down and check the safeties. I can go ahead and assure you of that.

We're talking about the quarterly checks I've heard mentioned. I don't feel too great about the quarterly checks only being the only time that vessel was checked. Two vessels that we red-tagged, steam generators, two weeks ago were corroded horrible. It was -- they had leaks blowing out. In the quarterly check, they wrapped cloth around this vessel to hide these leaks instead of shutting the vessel down and taking it out of service. So the quarterly checks don't make me feel too comfortable as far as public safety goes.

MR. ANDRUSKY: Those were STERIS vessels?

MR. O'GUIN: Yes, sir. And it was STERIS quarterly checks.

MR. ANDRUSKY: That's not standard procedure by no means. That's not encouraged, and, in fact, it's discouraged, and it's actually -- well, we'll just say that it's not our policy.

MR. O'GUIN: That's all I've got, Chairman.

CHAIRMAN MORELOCK: Thank you, Mr. O'Guin.

Any other questions or comments?

MR. BAUGHMAN: I'm sorry. Again, this is Dave Baughman, board member.

CHAIRMAN MORELOCK: Go ahead.

MR. BAUGHMAN: Just again, there's some things that need to be addressed from an installation standpoint of the unit itself, the way that some of the apertures are on it. I thought that when we looked at the data tag of the boiler itself at the job site that it was actually in kilopascals and not psi, also. I may be mistaken, because I was looking at a lot of different things on the unit itself.

But again, there's just some things that need to be addressed from an installation standpoint. There's one item that came up within

the installation safety precautions that STERIS has produced. And the statement is, "Components are not to be removed from the sterilizer at the job site to accommodate inadequate clearance considerations."

And that statement itself is somewhat interesting. And I just wanted to kind of bring that up because I don't see what's written and how we can perform that at the job site. It's just a concerning statement. So --

MR. ANDRUSKY: This is Roger Andrusky.

The reason for that statement is that we don't want them taking things off of the sterilizer to get it through doors. They can't just take the plumbing off if they think they have to clear a door, because it is an FDA-validated vessel. So we just put that in there so that everyone knows that if you can't get it through the door, you have to find another way.

Now, they can take the side panels off and things like that, but those are still in line with the frame. So that's really the intent of that remark.

MR. BAUGHMAN: Good. Thank you for

that clarification.

MR. ANDRUSKY: You're welcome.

CHAIRMAN MORELOCK: Any other questions or comments?

(No verbal response.)

CHAIRMAN MORELOCK: So I think we've had an excellent conversation, and so I'm going to ask the inquirers, what do you want to do? Do you still want to try to pass this board case, or do you want to pull it back and do some more work on it, or do you want to change it? What do you want to do?

MS. LaFRANCE: I think we would like to pass the board case unless Chris Puri has a different opinion. You know, every day we're installing units, and we need resolution to this question.

CHAIRMAN MORELOCK: Okay. So --

MS. LaFRANCE: I'm not sure, you know -- I mean, we can certainly take your suggestions and work on them, as far as the installation. The tag, we can have a duplicate tag for you to see for the generator. We can certainly, in the field, put additional piping on -- we could take the piping that's on there, on

the safety valves, off and put longer piping on.

MR. ANDRUSKY: But he's concerned that was actually supporting that pipe.

MS. LaFRANCE: We can look at -- we can fix all of those things very easily.

CHAIRMAN MORELOCK: Well, I mean, again, this is your item, so I'm not going to tell you what to do. There's been a lot of conversation. All of this is going to be in the minutes, which are publicly available. You can get a copy of the minutes. You can go through all of the suggestions and information that's been given to you. You can update the item and bring it back in June. You could put it to a vote today if that's what you want to do. I mean, it's entirely up to you. It is your item. So, you know, what do you want to do?

MR. PURI: Mr. Chairman, so there have been a couple of issues raised. I mean, our initial inquiry was relative to the space clearance relative to inspection. There have been some issues raised by the Board both relative to that issue. But then, I think, other issues that are kind of beyond the scope of what the question in the case was to the issues about the

installation and the design and some of those other questions.

Would it be acceptable if you-all -- I know you have one more item on the rule case and interpretation. Would it be acceptable for us to confer and then you will hear that case, and then we could answer your question as to what we want to do after having a short conversation?

CHAIRMAN MORELOCK: I'm agreeable to that if the board members are agreeable to it.

MR. BOWERS: It's fine with me, Harold Bowers.

CHAIRMAN MORELOCK: Okay.

Mr. Henry, are you okay with that?

MR. HENRY: Yes. Fine with me.

CHAIRMAN MORELOCK: Dr. Hargrove?

MR. HARGROVE: Agree.

CHAIRMAN MORELOCK: Well, so here's what we'll do. We'll table it. We'll move your item to the bottom of the agenda, and you've got some time to confer and then we'll come back to you.

MR. PURI: That would be appreciated.

CHAIRMAN MORELOCK: All right.

Very good. So we'll table this for a few minutes.

So that takes us to Item BI 21-02. ECS Consulting, LLC requests interpretation on requirements for manually operated remote shut-down switches assigned to low-pressure boilers installed and operated in the state of Tennessee. So that would be Mr. Toth.

And are there any conflicts of interest on this interpretation?

MR. BOWERS: This is Harold Bowers. No, Brian. But do you mind if we take a little break first?

CHAIRMAN MORELOCK: Certainly.

MR. TOTH: Mr. Chairman, let me be real quick, and Mr. Bowers. I would like to table this. Assistant Chief O'Guin and I have been conversating. I think the Boiler Unit wants to take some -- even though this has been around since 2019 -- but the pandemic has messed up everything -- he's wanting to work with other jurisdictions to kind of see what they're doing and then get back with me. So being low-pressure boilers, being e-stops, just on the low-pressure boilers, I'm very comfortable with tabling this item, especially since today seems like a pretty

long day and I'm going to have to get off soon anyway. But if that's okay with the Board.

CHAIRMAN MORELOCK: So do we want to table it until June?

MR. TOTH: Yes, sir.

CHAIRMAN MORELOCK: Very good.

MR. PURI: With that, Mr. Chairman, if you could give us maybe five minutes or so. During the break, we'll talk and be able to come back and --

CHAIRMAN MORELOCK: I'll tell you what we'll do. We'll take a ten-minute break, or whatever it takes to get us to noon, 12 minutes. We'll take a 12-minute break. And will you be ready to come back at that time?

MR. PURI: We'll be ready. We'll have a conversation.

CHAIRMAN MORELOCK: Okay. Very good. So we'll take a break until the top of the hour, and you-all can come back and we'll discuss your item and see what you want to do.

MR. PURI: Thank you.

CHAIRMAN MORELOCK: All right. Thank you-all.

(Recess observed.)

CHAIRMAN MORELOCK: We are back in session. So Eugene, go ahead.

MR. ROBINSON: My name is Eugene Robinson, and I'm a boiler inspector. I work for Cincinnati Insurance.

I'm going to share my screen with you, I think. Are you guys seeing the code case?

CHAIRMAN MORELOCK: You need to scoot it over a little bit.

MR. ROBINSON: Let me try this. Just a minute.

MS. LaFRANCE: Guys, I cannot hear.

MR. ROBINSON: Okay. Just a minute, ma'am.

How about now? Can you see your screen?

CHAIRMAN MORELOCK: We can see your screen, but it's a blank screen right now.

MR. ROBINSON: Okay. It says you're sharing -- stop sharing -- it should be there. Let's see. New share. Let's try that. How about now?

CHAIRMAN MORELOCK: There you go.

MR. ROBINSON: Very well. Okay.

My name is Eugene Robinson. I am an

inspector. I work for Cincinnati Insurance. And I would just like to draw the Board's attention to the board case that was mentioned during the beginning of the meeting by Mr. Marty Toth who indicated the clearance requirements for both hot water heaters and also unfired pressure vessels. And if you'd like, I'll just give you a moment to digest that.

Potable hot water heaters, unfired pressure vessels adhere to three-foot clearance set forth by 0800-3-3-.04(13) of the Tennessee Boiler Rules and Regulations.

In the opinion of the Board, hot water heaters that do not exceed a heat input of 400,000 BTU -- I don't know how many kw that 600 is -- and unfired pressure vessels that do not exceed the 50 square feet, measured by diameter and length, are exempt from that requirement. Providing the nameplate and the code stamping that is in view or as stated in the rule, and there is a minimum clearance of at least one and one-half feet, 18 inches, between all sides of the vessel, unless further permitted in Rule 0800-3-3-.04(13(b).

My question is I realize that STERIS

is asking for, I believe, zero clearance on both the right and the left side, as well as the back of the unit. And I am inclined to request that since the information -- and you cannot really determine if anything catastrophic is behaving on the right and the left side at zero clearance in the back -- is ignored, that it's going to be a problem for the inspector to make a determination that the vessel is safe.

And somehow, I think that it's important -- and, unfortunately, we need to really see this when the units are operating, as opposed to being moved in and out of the compartment that it's in. And I realize that the 600 is a unique model. I'm not sure if it has -- and I did not -- I was unable to see the actual package that you guys submitted, so I'm unsure if the heating elements are front and rear or singular, just at the front. But in any event, I do know that scale buildup is an important issue inside the boiler for standard operating conditions. And that's the most probable failure mode that we'll see. I have seen some with steam leaking out of the sides and the hoses that had severed on the pumps. And I would like for you, hopefully, to consider if you

could provide some clearance so that a determination could be made as to the safetiness where the safety of the boiler has not been sacrificed.

That's all I have.

CHAIRMAN MORELOCK: Thank you, Mr. Robinson.

So Mr. Puri, what have you-all decided?

MR. PURI: Well, Mr. Chairman, at this point -- I mean, we've certainly heard a lot of concerns from board members and others. I think, at this point, we would ask that you table the board case until the June agenda. That will afford, I think, a couple of opportunities. Number one, as we've said, there's been some issues raised relative to the specific installations that aren't necessarily specific to the question about the zero clearance. And I think we need some more clarity relative to those, and that would afford some time for us to have a conversation with Mr. O'Guin and his staff about those as well as others, and then, also, to address this issue that Mr. Toth brought up relative to presenting this in the format of a

variance, a specific line-item variance versus a board case, which we can also have discussion and get some guidance as to the Board's desire to hear it that way. Because that's -- you know, we've been trying to sort of posture this the best way, so if we can do that and then also kind of be assured of some dialogue and input, I think that would help us get it in a posture that I'm hearing the Board wants it to be in.

CHAIRMAN MORELOCK: Well, and that's -- we certainly appreciate that. And as Mr. Toth did say, you can either work on this board case and, you know, you need to add a few more NBIC paragraphs to cover both the steam generator and the sterilizer. But you could also write it specifically for this product, this STERIS 600, and make it specific. And we'll leave that up to you.

And, you know, I want to personally thank you-all. It's a fantastic presentation to let us see what you're doing and see the equipment the way you presented it. Hats off to you. It was a very nice presentation. So thank you for coming and spending the time with us.

MS. LaFRANCE: We thank you for

your input.

MR. BOWERS: This is Harold Bowers, board member.

I think you have a real great presentation put together. And there's a few questions there and there might be some stuff that your technicians do that we're missing and you're missing on these blow-downs.

I would check with some of these technicians and say, well, the Board had questions about how we do the blow-downs. And that way the inspectors know how to do those blow-downs like your technicians do when we do our inspections. So there might be just a little more research you can get into and look at. And I know you don't have the actual technicians, but you have some people there. But you might have some actual technicians that can explain to you. And in some of these situations you might already have, that you're not aware of, like, maybe you have blow-down tanks and stuff like that in some of these hospitals.

But I think you have to go -- well, not actually go back to the drawing board, but go and look at -- just do a little more research, and

it would help us next time.

But thank you very much for your presentation.

MS. LaFRANCE: You're welcome.

MR. ANDRUSKY: This is Roger Andrusky again. I've got a question about the blow-down. We have a manual valve on these units -- obviously you can reach it from the front -- that would blow down to -- you call it a blow-down; we call it a flush -- to the drain. Is that acceptable? Because I'm a little bit unclear as what the requirement is for the flush on those units.

MR. O'GUIN: So you've got one valve, is what you're saying, to blow the vessel down.

MR. ANDRUSKY: Yes.

MR. O'GUIN: Okay. Is that specifically to this AMSCO 600, or is that in all the steam generators that you have?

MR. ANDRUSKY: Well, they all have it, but it's certainly on this one as well.

MR. O'GUIN: So you just have one fast-acting valve?

MR. ANDRUSKY: No. It's a gate

valve.

MR. O'GUIN: It's a gate valve?

MR. ANDRUSKY: Yes.

MR. O'GUIN: A slow-acting valve?

MR. ANDRUSKY: Yes. It's a manual valve on the unit. It does not have a flush and drain. It does not have an actual automatic flush and drain.

MR. O'GUIN: Is does not have an automatic flush and drain. Is that what you're saying?

MR. ANDRUSKY: Some do. Some don't.

MR. O'GUIN: You could add that, right?

MR. ANDRUSKY: Yes.

MR. O'GUIN: Would it still have the manual if you added the automatic?

MR. ANDRUSKY: A manual drain?

MR. O'GUIN: If you add the automatic like you were speaking of earlier, will it still have the manual gate valve so the inspector can blow it down while he's there on an inspection?

MR. ANDRUSKY: Yes.

MR. O'GUIN: Okay. That will be what we utilize, Dave, to check the low water.

MR. ANDRUSKY: So if a unit just has a manual valve and not the auto valve, is that acceptable for an inspector to do those checks, to flush the vessel and to check the flow switches? Or does it have to be an automatic, something he does from the control?

MR. O'GUIN: No. It needs to be manual. We can manually blow it down to check the safeties.

MR. ANDRUSKY: So that manual valve is acceptable. Okay. Thank you.

MR. BAUGHMAN: This is Dave Baughman, board member.

Somebody might want to check the requirements for the high-pressure boiler to see if it's required to have two valves, one slow and one quick.

MR. TOTH: Mr. Chairman, this is Marty. I'm sorry. I'm remote now.

I can help with that. But it's a miniature unit, so one for its size is allowed.

The concern that I have and the Boiler Unit would or should have is these units

with automatic bottom blow systems. You can have a surface blow system. The automatic, you cannot have a bottom blow system be automatic per code. It can only be intermittent and manually operated, or -- yeah. It cannot just do it on its own.

MR. ANDRUSKY: I'm not quite sure I understand. Are you saying we can't have a scheduled flush?

MR. TOTH: You cannot have a scheduled flush, per code. The bottom blow, which would be, in your case, a smaller unit, so it's probably the only blow-down you have. You don't have a surface blow system. You have a bottom blow system. That bottom blow system has to be an intermittent system. It cannot blow down on its own. It has to have human interface for a blow-down.

MR. ANDRUSKY: Is it acceptable to have -- because the program offers the option of being able to set a schedule for a flush. If we don't set that schedule and we -- we, actually, do the setup when we do the startup. We don't set a schedule, then, as part of the auto flush, like, you know, at 6:00 in the morning or 1:00 in the morning or whatever it might be, but that is not

acceptable? And that the customer would sign off to that effect?

MR. TOTH: Again, that would have to be the Boiler Unit and the Board's acceptance, not mine. In that case, my professional opinion would be as long as it's not set up, there wouldn't be an issue. But I've ran into the situation where clients and manufacturers are putting automatic bottom blow-downs in their system, and they just blow down on their own, and that's not within code.

MR. ANDRUSKY: Okay. Because if we would have to make a change like that where we would not -- it would not be acceptable, then that means a complete software change and all that. But we can work with the customer on that at the site.

That's all. Thank you.

CHAIRMAN MORELOCK: Okay. So are there any other comments before we move on? And we're going to table BC 21-01 to the June 2021 meeting.

MS. LaFRANCE: Okay.

CHAIRMAN MORELOCK: All right. Thank you again. You're welcome to stay and hang

out with us for the rest of the meeting or whatever you need to do. But again, we do appreciate your time.

So that finishes new business. That will take us into -- well, no, actually, we finished new business. Our next rule case and interpretation is BI 21-02, which Mr. Toth has tabled to June as well.

So that takes us to open discussion items, and the first one is Mr. Dave Baughman, Tennessee Code Annotated 68-122-110, Inspection of boilers, (a)(2) that states that low-pressure heating boilers shall be inspected by internally and externally biennially where construction will permit.

So, Mr. Baughman, I'll let you present that item.

MR. BAUGHMAN: Thank you, Mr. Chairman. I appreciate it. And this was an item that got tabled because previous discussions were running lengthy, as this meeting is running lengthy, but it's good to get this up and at least addressed and off the table, especially at this time of year.

So the reason this was brought up in

previous meetings was as we're out in the field within the industry, what we were finding during -- and this has been going on for a number of years -- but what we were finding was, during inspections, inspectors had been making the notes of, well, you don't need to open that up. And well, you do. And so the discussion then came with where did you get this information. And they said, well, it's just been kind of passed down that these boilers are to be inspected at our discretion, not construction permitting, as the actual code states.

And this wasn't an isolated type of discussion. This has been going on for quite some time, and so it just kind of came to a head. And since I was bringing it up and I got charged with putting together further discussion so that we could bring clarity to not only the Board, but really to our industry itself, our inspection industry, our maintenance industry, service industry and so forth, which all works hand in hand.

But 68-122-110 is specific in how it states the code presently. And so we wanted to bring clarity to that. And as we talk to those in

the service industry, we in the service industry, when we break the boilers open, we see what the results are internally of those boilers. In particular, low pressure, whether the low-pressure steam or hot water boilers, both supply and heating, and there's more and more incidences of failure modes of these boilers that could have been averted through the proper inspection.

And so, as the discussion goes, the service personnel/maintenance personnel advocate the code, as it states, there were more inspectors that said, well, I really don't think it needs to be inspected internally on a biennial basis, or once every two years. If the boiler looks good, it's probably going to be good. And so this discussion is just to bring clarity to this particular code.

And so what the basis of it was, was that we needed to be able to start from the top down, that is, through the leadership down, because that's where this information comes from, to state, okay, we need to be inspecting these boilers internally once every two years where the construction permits.

Now, that, in itself, is its own

discussion because the customer will say, well, we can't open this boiler up. There's certain boilers like, let's say, for instance, a Rite or an AJAX that have a big bolted door on each end. It's very difficult to take off, but it can be taken off. It's meant to be taken off. And the manufacturer asks that it be taken off. It's within their recommendations themselves that these units be looked at.

But there's certain boilers that are on the market now, some of these high-efficiency boilers of different manufacturers, that are virtually impossible to look at internally. We can look at low-water devices, whether they're probe or float type, we can check float switches, the flow switches. We can check the operational conditions. But some of these boilers, construction is not permitting the internal inspection. And so there's some education that needs to be had within the industry on how these boilers are taken apart, what needs to be taken apart and so forth, instead of taking this wide brush and going, well, they're heating boilers; they only operate four to five months out of the year; they're hot water; there's no influx of

makeup coming into them; there's all different aspects to it.

But what it boils down to is that these boilers do need to be looked at internally as the code states. And so this discussion is brought to the table so that we can bring some clarity to the industry on that.

MR. BOWERS: Well, from the boiler inspector's side, I think it pretty well spells it out when construction permits. Now, the inspectors have a high level of different training, but the authority comes back to the Boiler Unit and the Chief Inspector or Assistant Chief, as we've got now.

So I realize, as an inspector, going to a lot of places, that all of us inspectors don't do, maybe, always, the proper job. We usually have a -- our company says, well, if it has the -- if it does have a manhole or hand holds, they really need to be opened up.

But sometimes you look at smaller boilers -- but it has to be a case-by-case basis. You know, at some point in time -- I know this year is a really busy time for the Boiler Unit, and I had talked to Mr. O'Guin about it -- maybe

all the inspectors getting together and having a training session. And the Boiler Unit kind of -- he sets the -- the Boiler Unit and the Chief Inspector sets the tone of what is done and isn't done, and -- as far as construction permits. And he can come back and say, hey, you guys, you-all need to do -- I mean, the Chief Inspector, just to tell you, he's over only -- his state inspector, he's over all the insurance inspectors, too. And he can come back and say, hey, you guys need to do a better job. There's boilers that need to be taken apart, need to be taken apart.

But he is the authority, and he can come back and any permit that we submit to the State, he can cancel that inspection. He can say, No, I don't think you-all did.

And that's why we try to, as inspectors, put some comments in those comment sections. And I know in the past where people have made comments in the comment section, that they did an external instead of an internal. And this, of course, is a high-pressure boiler, and the State kicked it out and they said, no, no. We want -- just because you couldn't do a confined space does not alleviate your responsibility of

doing internal inspections.

So it still goes back to the Boiler Unit and the Chief Inspector to make those determinations. I mean, we can make all these rules and stuff, but they are the authority. They are the top cops. They are the guys on top to make the determinations. And the only way they can make them is to -- you know, it's a case-by-case basis. I mean, you can't leave it up to the contractors because they would say, well, every boiler needs to be opened up. But it's got to be a case-by-case basis. And somebody's on top, and that's why we have a Chief Inspector to make those determinations.

MR. BAUGHMAN: I appreciate that input, Mr. Bowers, very much.

One of the things that we've had discussions on is the accountability of the inspections. Writing things down is part of the accountability, but in this day and age, being able to take a quick picture of things works out extremely well.

And so what we've had is a number of times when something is said, that it's been inspected internally, and, because of the varying

levels of what we have in our industry, that doesn't always happen. And so, in particular, we had a hot water boiler, yes, we looked at it internally; well, we broke the boiler down and the float was collapsed on the low water.

This had passed both an internal inspection, as such, and an external inspection. Those items are supposed to be checked during the operation of the boiler. Well, it, obviously, didn't happen.

But what we're looking at is trying to bring an extra level of -- I don't know if it's an extra level, but bringing a level of safety to the state of what our code dictates presently and what the customers are paying for. In other words, we're charged with these inspections, and if the inspections aren't being done properly, then we're not doing the service that we're charged to do.

And so that's where we just need to bring this clarity to get everybody on the same page. And there's a lot of in-expertise, as far as designs out there, what's able to be looked at, what's not, what can be opened up, what can't. And so there needs to be a higher level of

training in our industry. And that's something that was mentioned in the previous discussion, was bringing additional training to the table for the inspectors.

But all in all, I don't necessarily look at it from a case-by-case standpoint; although, the inspector still has it at his discretion, it seems like, to determine this construction permitting aspect of it. And so, again, it's just part of this discussion.

MR. BOWERS: But it's his discretion, but yet -- it's not my discretion; it actually goes to the Chief Inspector. I can make a discretion -- I can say, yes, I can't do this inspection the way it is. And Chris can look at it and say, Harold, I looked at your inspection report. I think you could have done a better job. I think you need to go back over there and open that boiler up and do it, or I'm not going to approve this permit. I'm not going to pass this.

I'm only the guy submitting it to the State. It comes down to the authority of the Chief Inspector. He is the one who makes that determination of if that permit goes through or doesn't go through. All I can do is submit it to

the State, and the Boiler Unit is the one to make the determination, if we're doing it right or not doing it right. He can say you guys need to go out and do a better job, or we talked about better training.

But it's our commissions on the line, and the Boiler Unit holds our commission. And he decides if we're going to be allowed to do inspections in the state of Tennessee. It's up to him. If we don't do a good job, he can say, well, you do a good job or else you won't be doing inspections in the state of Tennessee. That's what it boils down to.

MR. BAUGHMAN: And one thing I would add is that we sure don't want to go out and have an inspection not approved and have to reinspect it, especially on a hot water boiler. We want to take these boilers down as infrequently as possible. But we sure don't want to drain them any more than what's mandated by our inspection code.

So I just think that communication is kind of key on the front end between the customer, the mechanics, and the inspector to be able to identify these pieces of equipment, to know --

because the inspector doesn't have -- he's not opening the boiler. He's relying upon somebody else, usually the customer or a contractor, to open the boiler. And so if there's communication ahead of time to say can this boiler be opened and opened competently, without any problems, that in itself may go a long way.

But again, it's just getting clarification from the top down to be able to say it's not at the discretion of the inspector. It is part of the code and it is construction permitting, but it goes back, again, to the leadership to be able to communicate whether that boiler is able to be opened up competently or not.

CHAIRMAN MORELOCK: Mr. Toth?

MR. TOTH: This is obviously not a situation that is new, as Mr. Baughman alluded to. This is something that has been going on for decades, including under my tenure as Chief.

The way that the inspectors were trained, especially in regards to the different types of low-pressure boilers, they were restricted because the code reads and the code only allows -- now, I say "only allows" -- you can inspect it as many times as you want. But the

owner/user is only going to be invoiced for the inspection that is performed for the certificate on a low-pressure boiler, being once every two years, so that's a biennial. And so with high-pressure boilers, you had a biannual inspection, so that was, you know, roughly every six months. The only way that I see that this can be something that is truly enforceable is two ideas. Number one: Obviously, we've talked about the training of the individuals, but that goes over into the rules being altered specific to different size and models of units that are out there. Okay?

I've seen in other jurisdictions where they separate hot water supply units, hot water heaters, from hot water heating boilers, from high-temp water boilers. And so construction plays a big part of that.

The inspector has to be entrusted. That's what they're doing. They're being entrusted when they receive a commission from not only from the National Board but, more specifically, the State of Tennessee to do their job. Okay?

If we look at the internal inspection

versus the external inspection, what we will find is if we are limited to one inspection for a low-pressure boiler, I'm probably going to lean a little bit more towards an external where we're actually testing the controls and safety devices.

On a high-pressure boiler, they're equally important to me. On a steam boiler, no matter high pressure or low pressure, both are extremely important. Okay? We've got to look at is it a water boiler or is it a steam boiler. If it's a water boiler and it's a hot water heating boiler, it's better to keep those boilers closed so we don't allow for oxygen to get into the system that is highly corrosive.

So there's a lot more to this than just saying, okay, we're going to train some people. There's a lot more homework that's going to have to be done in this to get -- either it's handled as guidelines to inspectors, training those inspectors, and getting the rules and regulations in line with what you're wanting the inspectors to do. Thank you.

MR. BAUGHMAN: I appreciate that input, Mr. Toth. Part of the argument in this discussion was -- or the debate, I should say --

was within the hot water end of it, being that it's a closed-loop system, you don't want to bring in fresh oxygen and what have you. The problems that we've encountered have been boilers that have been full of mud, the hot water system piping leaks between the boiler room and the gymnasium, the boiler room and whatever the system where they've got piping that leaks. And when it leaks, it has an influx of make-up water. It brings in sediment and so forth.

These boilers are maintained to a very low degree and are attended to by a low degree. In a lot of instances, these boilers are at schools, churches, apartment buildings. The person that's maintaining the boiler, checking the boiler is the same one that's waxing the floors, taking care of the lockers, so forth. They're very little trained, if any, and don't have a high degree of operational background.

So we're talking about boilers that -- we're looking at checking the controls once every two years, but we're not looking at the internals. And so the pictures that we've documented have shown these hot water boilers that are in horrible shape. And the claims that were

put in -- and there's two in particular, but one at a church and one at a school -- the insurance company was denying the claim because they were claiming erosion and corrosion because of improper maintenance of the boiler. And the boilers had never been opened up. And if they had been opened up, these conditions would have been found and tended to and so forth. So the insurance company came back and paid the claims, because the inspector confirmed they had never looked inside the boilers.

So ASME has in their Article 11 inspections of installed boilers, and under 11.1, periodic inspection of boilers. In (a) all boilers should be prepared for inspection. And it gives it back to jurisdictional requirements and so forth. Instead of specifically stating you have to do this, it goes and states to follow the jurisdiction.

In our particular state, years ago -- and I've been here 44 years this year -- this used to be part of what we did. It was -- in past administrations, these boilers were opened up. And somewhere along the line things changed. And I don't know why they changed, but the rhetoric

changed, and that's why this needs to be brought back full circle where it was supposed to be. But, there again, that's what I've seen in the industry. That's what we're experiencing when we're opening these boilers up. Kind of, the proof is in the pudding.

But we've got a code that is pretty specific in its wording. So I bring this up for discussion for not only Mr. Toth and Mr. Bowers and Mr. Robinson, but, also, getting Mr. O'Guin's input in on it also.

MR. O'GUIN: Yes, Dave. I was sitting here reading the law. You know, the law says "Low-pressure heating boilers shall be inspected, both internally and externally biennially where construction will permit."

And I will agree there's some low-pressure boilers that should be opened up. I guess it's something we need to look at and, you know, whether we need to write an interpretation or how we need to handle it for the insurance agents, because I can't train every insurance inspector that comes from all over the United States to inspect in Tennessee. You know, they may call and get a Tennessee commissioner for an

inspector in Tennessee from California, and he'll be here next week. There is some things coming later on down the line to maybe help with this issue.

But at the current time, you know, we may have may to look at an interpretation to supply some of this code that needs to be enforced.

CHAIRMAN MORELOCK: So, Mr. Baughman, where do we do go from here?

MR. BAUGHMAN: Well, that's a good question. That was part of the discussion. What I would like to have is from the administrative leadership in the Boiler Unit to be able to communicate through their unit back to the state inspectors and the insurance inspectors in whatever form that may take is that these boilers need to be inspected as the code states, construction permitting, but not at inspector discretion.

In other words, if there's a question on whether this boiler can be inspected internally and competently, then that needs to be directed back to the Boiler Unit. The Boiler Unit can then research that back out through its own means in

the industry, whether that's through the manufacturer or service company or whoever, and be able to advise the inspector back on whether that boiler can be inspected internally with the construction permitted.

CHAIRMAN MORELOCK: So would this be handled at the state level or would it be handled through QAI and ASME or a committee on the National Board, or what are your thoughts on that?

MR. BAUGHMAN: Well, personally, I think that we've got a code in place as it is, and it's our jurisdictional code requirement. And passing that information back down, whether that's in the form of a letter, an email, or what have you, so that there's at least some clarity to say we're enforcing this code to the extent that it needs to be, and where there's further questions on the construction of the boiler, to be able to bring those up.

I don't know if it goes back so much past our jurisdiction or not as it is taking the code that we have in our statute and passing that information back to our inspectors. I'll let Mr. O'Guin kind of give his input on that.

MR. O'GUIN: Chairman, I think we

can handle this within the WRC unit itself probably via letter. What I was trying to look at real quick in the law, does it give the Chief Inspector the -- I'm thinking it does but I can't recall the code -- the authority to grant a variance for any specific low-pressure boiler? Like, say, if there is one that we can't do an internal on, you know, the Chief Inspector, if reached out by the insurance company, could say yes, it's okay to perform an external in lieu of an internal?

CHAIRMAN MORELOCK: There's words in there. I don't have it right off the top of my head. I see Dan reaching for a book. I don't know if he's looking it up. He's grinning so he may be looking.

MR. BAILEY: I've tried to take a quick look, but I don't recall that being in the statute, Chris. Now, I could be wrong. I'm thinking all variances have to go through the Board.

CHAIRMAN MORELOCK: Oh, they do. But -- I mean, you're correct on that, but --

MR. BAILEY: Okay.

CHAIRMAN MORELOCK: I think

Mr. O'Guin is thinking about the rule, right?

MR. O'GUIN: Yes, sir.

CHAIRMAN MORELOCK: So we would just have to go back and research that. I guess my thoughts on it is, is this something that -- I know, due to COVID and things, we didn't get to do a fall conference, but is that something that we could do annually at a September fall conference or something to get the inspectors and the board members and get everybody together and have good conversations and training about this?

MR. O'GUIN: It is. I don't think this year we will have the time to plan a conference for the insurance companies as well. I think this year we need to stick strictly to state inspectors at our fall conference due to the new computer system coming into play --

CHAIRMAN MORELOCK: Okay.

MR. O'GUIN: -- you know, possibly in May, and all the other changes within the unit.

CHAIRMAN MORELOCK: Okay.

MR. O'GUIN: I think it would be too time stressing to get everything prepared for a statewide training.

CHAIRMAN MORELOCK: And excuse me

in my ignorance, because I'm a pressure vessel guy more than a boiler person, but is there a specific brand or construction type that you could say this is what we're talking about, is this type of boiler or brand of boiler? Is there something out there to where you know that it's going to be difficult to inspect?

MR. O'GUIN: There's a lot of different brands that yes, there's really no way to do an internal on them. And you could open a plug on the side, you know, but --

CHAIRMAN MORELOCK: Yeah.

MR. O'GUIN: -- other than that -- I mean, but there's going to be a lot we can't do an internal on.

CHAIRMAN MORELOCK: Well, and what I'm getting at -- and don't laugh at me but -- this is kind of an out-there idea, but if you go to PBMA, you know, they mandate rules for air receivers that you have to put a three-quarter inch nipple or whatever near the circ seams, specifically, so that a guy can get a mirror and go in there and look at those head-to-shell circ seams, as for an inspection. And so I don't know if you've got leeway of doing that to a boiler or

not. Like I say, that's very simplistic, but --

MR. O'GUIN: And there are ways. I mean, you take these stand-up water heaters, I mean, they have the plates on the side you can pop off and you can see the hand holds. So, I mean, you could -- even those, you could do an internal, but you can tell by the hand holds and et cetera on those vessels, particularly the ones I just spoke of, whether they need an internal or not.

CHAIRMAN MORELOCK: Yeah.

MR. O'GUIN: I think the ones that are in question are the big boilers that it can be opened that are not being opened.

MR. BOWERS: Yeah. It's a case-by-case basis. And I think the training down the road would be good, and that way they can show pictures of boilers that need to be opened and boilers that probably can't be opened. I think it's a training thing. And that's almost like a case-by-case basis. And as it comes to -- as the inspection reports come to the Boiler Unit, you know, the guys in the Boiler Unit know which -- some of the boilers that probably should have been inspected internally or not.

What they need to do is probably, on

their inspection report, when you submit for an inspection report, make a note of that, that it was done internally or externally, and that way the Chief knows what kind of inspection was done and he can look at it and say maybe this is not the correct inspection for what you're doing.

MR. O'GUIN: I would like to speak on that a little. There's no way I can look at every inspection report that comes through this unit. But you can put in an internal even on a low-pressure boiler. I'm not sure how JO works, but we can in our system.

But if Mr. Baughman and Chairman, if you-all want to table this and I can reach out to the National Board and see what other jurisdictions do as well, see if they have, you know, specifics that they -- internal, and, you know, specifics they don't. I'll be glad to do that, and Jenny and I can present what I found and we can -- you know, we can make a decision and I can send a letter out to all the insurance companies, and, of course, have a training for the state inspectors from that point forward.

CHAIRMAN MORELOCK: Well, we can certainly work with the National Board and, you

know, all the chiefs have access to the form, but we can also go to the National Board and present them with a question and let them do a survey through all the chiefs and get you some data back. So I think that would be a good thing to do.

MR. O'GUIN: Yeah. That would be a good tool to utilize.

MR. BAUGHMAN: I agree with that. One of the things I would like to do is make sure that we stay on top of it for the simple fact that most of these hot water boilers and low-pressure steam that are used for nonprocess that are strictly heating boilers get inspected during the days that have no heating degree days, in other words, during the summer months, is the time of their inspection, or at least at the time that they should be inspected.

So I would like to, if we're going to discuss this further in June, make sure that we get our information available just so that we can stay on top of this, because we're going through this now, scheduling up some of the inspections for these heating boilers. If they're a process boiler and we've got hot water process boilers around the area, high-temperature hot water

process, it still falls under the same type of thing.

Sometimes it gets discussed; well, we look at a boiler if it's a production boiler or if it's, you know, in a brewery or if people look at it internally. But if it's another facility, not so much. And that's where I need to make sure that we don't have this wide variable in what it is that we're actually looking at internally.

So I think the suggestion of getting information from the other chiefs is super, and we'll continue to do that on other items that come up within our codes. I think that's an excellent resource that you guys have to bring to our table.

CHAIRMAN MORELOCK: Yeah. I'll work with Mr. O'Guin, and we'll work with the National Board and see what we can come back with.

MR. BAUGHMAN: Okay. Great. Well, we'll put this on the agenda then, if that's acceptable, to have more open discussion in June. Is that correct?

CHAIRMAN MORELOCK: Yes. That's why we have discussion items. That's exactly right.

MR. BAUGHMAN: Great. Well,

thanks. Thanks for all of you bringing your input to the table on this.

CHAIRMAN MORELOCK: Very good.

Okay. Our last discussion item is the Variance Guideline & Checklist Revisions. And so my question is does everybody have a copy of that hen scratching that I sent you? I do apologize. I just ran out of time to make it pretty. But this will give us an opportunity to -- so you won't feel bad about marking this one up, see, so...

All right. So does everybody have a copy?

MR. BAUGHMAN: Yes, sir.

CHAIRMAN MORELOCK: Okay. All right. So what I've done is, if you look on page 1 of 5 for the boiler attendant variance rule, I've changed the revision number from 10 to 11, and then I've changed the date from May 2017 to June 2021. I'm going to be optimistic that I'm going to get this done and get it on the agenda to vote in June.

What I did was I incorporated the board members' comments. And so the first comment was -- is we don't need the word "computerized"

anymore because if you buy a new boiler, it's going to have computerized systems on it anyway. So in the first paragraph, on the first page, I struck the word "computerized" in the first sentence.

And then if you go on to the flow chart on page 2 of 5, I modified the flow chart to add a box on the right side that if you are coming up on your renewal for your variance, instead of automatically scheduling it going to the Board for a review, you come up to this new box that's a yes/no in the work flow to say technical changes to the variance. And if it's no, then it's renewable by the Boiler Unit. And if it's yes, then you go through the normal process of renewal through the Tennessee Board of Boiler Rules to get that variance reapproved with the technical changes.

Any questions or concerns about that?

MR. BAUGHMAN: The left-hand side of the flow chart, Mr. Chairman, where it starts with prepare variance and comes down to Chief Inspector --

CHAIRMAN MORELOCK: Yes.

MR. BAUGHMAN: -- and then Board of

Boiler Rules reviews it, then Board of Boiler Rules approves it or not.

CHAIRMAN MORELOCK: Yes.

MR. BAUGHMAN: And now I understand, going through the process. But after the approval, then it comes down with Boiler Board notification of approval. Do we actually get that? Is that done through our board meeting where they say that there's been inspections and they've passed and so forth? Is that what I'm understanding?

CHAIRMAN MORELOCK: Yes. That's typically done in the Chief's report or the Assistant Chief's report.

MR. BAUGHMAN: Okay.

CHAIRMAN MORELOCK: That's where you get the statistics and all that, so...

MR. BAUGHMAN: Well, in that -- so we get that, but then it goes from that to the request for state inspection. And actually, it goes state inspection first, and then we get notified of the approval, is it not?

(No verbal response.)

MR. BAUGHMAN: We can't get approval without having the inspection first.

CHAIRMAN MORELOCK: Well, yeah. Because what you're looking at is if that was a new variance, you know, you're right. Because we would approve it, then there would be a site visit, and then that would take you over to the Boiler Unit. So we may have -- you're saying we've got some redundancy in there? Is that what you're thinking?

MR. BAUGHMAN: Well, no. I think that the request for state inspection would go in place of the Boiler Board notification of approval. I think that those two would just swap.

CHAIRMAN MORELOCK: Okay. I got you. I can do that.

MR. BAUGHMAN: Does that make sense?

CHAIRMAN MORELOCK: Yes. Do the other board members agree with that?

(No verbal response.)

CHAIRMAN MORELOCK: I'll show that swapped.

MR. O'GUIN: I was taking that as us, like, notifying the variance applicant.

CHAIRMAN MORELOCK: For the Boiler Board notification of approval or the request

for --

MR. O'GUIN: Right. That's the way I was reading that. Which I don't know why we would need it, because if you're yes, you're automatically going down to request for a state inspection.

CHAIRMAN MORELOCK: Yes.

MR. O'GUIN: And then you're going into the, you know, State of Tennessee inspection and mods and et cetera.

MR. BAUGHMAN: I'd particularly like to know whether they're approved or failed, so I would still look to have that in the flow chart.

MR. O'GUIN: Okay.

MR. BAUGHMAN: As when you presented it earlier, it's good information to know.

MR. O'GUIN: Okay.

CHAIRMAN MORELOCK: So I'll tentatively mark it up, swapping the positions of those two items, and you can think about it.

MR. BAUGHMAN: Thank you, Mr. Chairman.

CHAIRMAN MORELOCK: You're welcome.

MR. O'GUIN: Could we word that, Brian, to Boiler Board Notification of Boiler Unit Approval instead of just the Boiler Board of Notification of Approval?

CHAIRMAN MORELOCK: Sure, I can do that. So tell me one more time so I get your exact words here.

MR. O'GUIN: Boiler Board Notification of Boiler Unit Approval.

CHAIRMAN MORELOCK: Okay. Got it. Is there any other changes on that flow sheet for page 2 of 5?

(No verbal response.)

CHAIRMAN MORELOCK: I'll make those changes and, like I said, I'll make it look a lot nicer and get it out to you.

All right. Hearing none, I'm going to move on to page 3 of 5, which is the guideline document. And the first change, again, is in the header. I'm going to take out the word "computerized." It will be Guidelines for Remote Monitoring of Boiler Systems. And again, I will change the revision from 10 to 11, and the date from May 2017 to June 2021.

And then we go on down to Item 2, and

the second sentence in that where it says a computerized remote monitoring system is the minimum requirement, I just struck the word "computerized," and then I also added a sentence to the last part of that Item 2 to state the approval date of the variance is the date of the Boiler Unit inspection and site visit.

MR. O'GUIN: Mr. Chairman, I had a question on that.

CHAIRMAN MORELOCK: Okay.

MR. O'GUIN: Our system is capable of telling us when it expires from the inspection date. We're getting so many that are applying way before they get the equipment in, so they're having to -- you know, it may be two years before they're ready for an inspection. And to be fair to them, we're letting them change the manual date so we're not back in another year to have them do another renewal.

CHAIRMAN MORELOCK: Well, and that's fair, because we used to put the approval date as when the Board approved it.

MR. O'GUIN: Right. That's what I was wondering. Should we keep it that date or should we change it to the inspection date of the

Boiler Unit? It would expire three years from that date.

CHAIRMAN MORELOCK: That's what I would recommend. That's why I've added this sentence that the approval date of the variance is the date that the Boiler Unit has an inspection and site visit. That will be the date that you will set your three-year renewal on.

MR. O'GUIN: Okay.

CHAIRMAN MORELOCK: Because, like you said, if somebody was building a whole new facility, which we've seen several of those, they come to the Board and get a variance, and three years later, they still may be under construction, you know, so...

MR. O'GUIN: Instead of expiring three years after the approval was granted by the Board, it's going to be after the approval date of the Boiler Unit inspection?

MR. BAUGHMAN: Yes.

MR. O'GUIN: Okay.

CHAIRMAN MORELOCK: This variance -- the approval date of the variance is the date of the Boiler Unit inspection and site visit. And that's what you'll put on the manual.

Is everybody okay with that?

MR. BOWERS: I have one question on that. Once they get that initial inspection done, then, from then on, that will be their birthdate. And every three years they'll keep that same date no matter when they do their inspection, correct?

CHAIRMAN MORELOCK: Well, the only thing that would throw a wrench in that is if -- I would agree with you 110 percent if they made no technical change to their manual. But if they make a technical change to the manual, then it's got to come back to the board, and then you've got to do another site visit. So that's going to throw that off every three years, right?

MR. BOWERS: So they'll have a new anniversary date, basically.

CHAIRMAN MORELOCK: If they have a technical change.

MR. BOWERS: Yeah.

CHAIRMAN MORELOCK: I mean, do you-all agree with that?

MR. BOWERS: Perfect, I think. It's a good idea.

CHAIRMAN MORELOCK: All right. I'm not hearing any opposition. Going once, going

twice. All right.

And so, then, going down to paragraph 3, a variance grant will expire three years after approval is granted by the Board, which Mr. Bowers just talked about. And so I was going to put an "and" in that first sentence to say the variance grant will expire three years after approval is granted by the Board and a successful inspection by the Boiler Unit.

What do you think about that?

MR. BOWERS: Sounds good to me.

CHAIRMAN MORELOCK: Because --

MR. BAUGHMAN: I couldn't read the writing where it said the Boiler Unit. But I'm good with that now. Sorry. I just had to put that in there.

CHAIRMAN MORELOCK: That's quite all right. No, no, no. I have to apologize to Cassandra every time she transcribes. She's getting pretty good with this Tennessee English.

MR. BAUGHMAN: I agree with this.

CHAIRMAN MORELOCK: And so I think that makes sense. So let me ask you this: For a variance that comes to the Boiler Unit, no technical changes, they're just re-upping it, do

you do a site visit?

MR. O'GUIN: Yes.

CHAIRMAN MORELOCK: Okay. So then that will make perfect sense to add that into that sentence. Because, obviously, if there's technical changes, you would expect that. But if it's a regular renewal where we don't even -- the Board doesn't get involved with it, it's strictly through the Boiler Unit, then adding that to three will make sense that a variance grant will expire three years after the approval is granted by the Board and a successful inspection by the Boiler Unit. And if you just do a straight-up renewal, you'll have a site visit as well. So that's good.

All right. Any more questions about page 3 of 5?

(No verbal response.)

CHAIRMAN MORELOCK: All right. I'm going to move on to page 4 of 5. And honestly, the only change I have there is, if you go to paragraph 2, item B, the last sentence, right at the end of that, there's two "the's" in there, so I'm just striking one of the "the's" out. So that's just an editorial.

I have no changes on page 5 of 5.

And then that takes us to the checklist.

MR. BAUGHMAN: I had one item that we had listed, and it may be in here, quickly.

CHAIRMAN MORELOCK: That's fine.

MR. BAUGHMAN: But it was under Section 2, the system operating manual was that -- and it may have been changed. Let's see. It says any changes must have prior review and acceptance of the Tennessee Board of Boiler Rules.

And so in those comments that were sent back in in October, I put down that it was worth a discussion on what changes constitute technical or editorial.

CHAIRMAN MORELOCK: What page are you on?

MR. BAUGHMAN: Page 4.

CHAIRMAN MORELOCK: Of 5? Okay.

MR. BAUGHMAN: Of 5.

CHAIRMAN MORELOCK: And it's paragraph 2?

MR. BAUGHMAN: No. This was in paragraph 1.

CHAIRMAN MORELOCK: Oh, okay. I see it.

MR. BAUGHMAN: And it's, I think,

the next to the last sentence. Any changes must have prior review and acceptance. And so --

CHAIRMAN MORELOCK: We need to put "technical" in there, don't we?

MR. BAUGHMAN: Yes.

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: I thought so.

CHAIRMAN MORELOCK: Yeah, that's right. That's a good catch. So I will add the word "technical" in that next-to-the-last sentence where it says any technical changes must have prior review and acceptance by the Tennessee Board of Boiler Rules, right?

MR. BAUGHMAN: Yes, sir.

CHAIRMAN MORELOCK: Okay. Good.

MR. BAUGHMAN: Then, under Section -- in that same section on page 4, coming down to Section 2(b) --

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: -- was -- the recommendation was, again, to remove the wording of "computerized," making --

CHAIRMAN MORELOCK: Oh, yeah. I missed that one. Sorry.

MR. BAUGHMAN: That's all right.

And then, also, we worded the "dynamic self-checking," that whole statement of the primary controller shall be dynamic self-checking, that was discussed because not all of the computerized systems were necessarily dynamic self-checking and whether that was really a necessary requirement of remote monitoring, which we'd talked about "not necessarily," so...

CHAIRMAN MORELOCK: Okay. So just take that whole sentence out?

MR. BAUGHMAN: Deleting --

MR. TOTH: Mr. Chairman, this is Marty. You want to keep "self-checking" in there. It's just the phrase "dynamic" is unnecessary and usually a manufacturer's term.

CHAIRMAN MORELOCK: Okay. Just take out the word "dynamic"?

(No verbal response.)

CHAIRMAN MORELOCK: Yes?

MR. BAUGHMAN: And when you -- so, Mr. Toth, to further discuss that, there's certain controls that aren't dynamic or self-checking, i.e., the low-water cutoffs.

MR. TOTH: Okay. Well, that's -- I agree with that, but that's not the same -- that's

not the same thing.

MR. BAUGHMAN: I guess I don't understand.

MR. TOTH: Well, because when you're talking about the boiler operation, you're talking about the burner management system, i.e., Flame Safeguard, you don't have dynamic self-checking in regards to water level indication. Your water level indication is going to be sending a signal. That signal, wired through your alarm circuit is what's going to trip that boiler. That boiler is what's going to be dynamic -- or it's self-checking that boiler control.

So when you -- if you take out "self-checking" -- and the reason why "self-checking" was put in had to do with self-checking your flame scanner. And flame scanners do a self-check between three and four seconds by code. And so does your controller. So that's where that terminology came into play.

And under the previous line item for a request from the hospital, you asked that question concerning the low-water cutoff and gas pressure switches and things of that nature

because that's not really part of what the variance -- the variance has to be self-checked through the burner management system, not the low-water cutoff. Then the low-water cutoff is just wired directly into the alarm circuit.

MR. BAUGHMAN: Uh-huh. So -- and I hear what you're saying. So systems that would not have self-checking -- in other words, what you're saying is the flame scanner, i.e., in infrared or an ultraviolet scanner would be self-checking.

MR. TOTH: You're saying IR and UV. The situation that you run into, most scanners are not designed specifically for dynamic self-checking. What is, is the controller looking for that signal every three to four seconds. That's where the self-checking comes into play. Because if not, then you're going in and pretty much every variance that we have out there -- not every but a good portion of them don't have dynamic self-checking flame scanners. It's all controlled through their flame safeguard, i.e., the burner management system.

The only thing that you're going to have that would be, quote/unquote, self-checking

in a low-water cutoff is going to be a model like a Clever-Brooks Level Master, that if the float doesn't move within a certain amount of time because it assumes that no water level is going to stay at the same level, it will cause an alarm. Other than that, you're not going to find that.

MR. BAUGHMAN: I guess what I'm getting at is systems that have rectification instead of ultraviolet in the scanner and infrared. The scanners themselves have a detection to time of whether it's 0.8 seconds or 3 seconds. But the controls themselves aren't necessarily all self-checking.

So what we're looking at is if this controller -- and we've looked at this in the past on some of these systems, and that's why it's important that we look at the flame programmers, was whether or not they met a requirement of self-checking, whether they be old 4140s or fire programmers or what have you.

So if, in fact -- and what we're wanting to do is monitor the systems themselves; in other words, the flame management system, whether the boiler is locked out, and whether or not this whole self-checking aspect of it actually

brings to the level of safety that we're wanting to, or if it's discriminatory in its application.

MR. TOTH: Right. And my take on that is when you -- you know, you're taking out the verbiage "computerized" because it's assumed all boilers are computerized now, which if you get a new boiler, it is. There's very, very few manually operated boilers out there.

The issue that you do is if you take out things like self-checking, okay, even the term "dynamic" -- and I mentioned this quite a few years ago in a board meeting of where the word "dynamic" came from, constant change or a change, and you say, oh, well, we're not going to use a system that is self-checking. Okay? Because -- and we start doing that and you start removing stuff, where is the backbone of what you have for the variance and the monitoring equipment that you're going to accept?

Are you with me?

MR. BAUGHMAN: I am to an extent.

MR. TOTH: A little bit?

MR. BAUGHMAN: But there again, what we're monitoring is the flame management system, the parameters that we're setting in. We

don't really even dictate those parameters. We're asking for a remote monitoring system to where we're not spelling out specifically what we're monitoring. And so whereas we're not specifically spelling that out, in other words, there's a lot of parameters to monitor, but we're leaving it up to the programmer to give that information back, but we're taking it a step further and saying that it's got to be self-checking. And so at some point in this great discussion, I just don't agree with that wording as we stand within the components that are broadly installed in our industry. Yes, the new equipment has the newest controls that are on the market. But we're applying variances to everything that's on the market, whatever age and whatever type of equipment that's out there. So that's where my thinking was from the standpoint of it's somewhat discriminatory to apply this, especially to the extent that we're not taking it to the degree of specifying what has to be monitored.

MR. TOTH: Okay. With that, let me ask the question to you and the Board. Is it allowed for a manually operated boiler to receive a variance in the state of Tennessee?

MR. BAUGHMAN: I would ask what is "manual"?

MR. TOTH: Okay. Manual operation. Well, more specifically, what is automatic? If we talk about what is automatic, an automatic boiler is a boiler that is started and shut off automatically based on the control settings. Okay?

So if we take out things such as "computerized," we take out "self-checking," what do we have that states that someone that has a manually operated boiler, i.e., a boiler that is going to have feedwater entered when needed, fires enter the burner controls based on load demand. Okay? And other situations like that are all automatically -- usually automatically done through the control systems, but we're removing all of that. Okay?

I know you've got vast amounts of experience, Mr. Baughman. But there's other boilers out there, okay, that are still manually being operated. Okay?

MR. BAUGHMAN: Fuel fired being gas and oil?

MR. TOTH: You can have gas. You

can have oil. You can have solid fuel. So are we specific to say that these are only boilers that are gas and oil? Because oil, we're used to seeing in this industry one burner, one boiler one burner. Not one boiler, multiple burners that we're going to remove a burner. Okay? The gun from the burner can run at a lower pressure or a lower rate of steam.

So all I'm saying is be careful of what you remove, because you may get a few requests that come in for some really outdated stuff.

MR. BAUGHMAN: Well, and then that would be our prerogative to discuss it at that particular time. I can see where you're going from a solid fuel standpoint. I sure don't know anything where somebody is lighting something up manually from the gas side or the oil side or manually doing feedwater unless it's a traction engine or something from the historic standpoint. So -- yeah.

MR. TOTH: You know, I appreciate -- I gave my two cents on it. You guys -- you know, you do whatever you see fit with it, and we're good. I've got to go into another

meeting, so I look forward to reviewing this. Is this going to be issued for public review once it's put out there before it's voted on? What's the schedule for that?

CHAIRMAN MORELOCK: Well, I think the plan is, you know, the Board will approve it, you know, in June or September. I don't -- I know we have public review on obviously the law and through the legislative process. And I know we had a review when we reviewed Rule 800. But I don't know that we had a public review for a guide.

MR. TOTH: And that's fine. My biggest concern is I've had an interpretation into the state office for over a year asking questions about this. And either -- I want to make sure those concerns are answered and those questions are answered. And that's all I ask.

CHAIRMAN MORELOCK: Okay.

MR. TOTH: Because I have clients that this is what they do, and I want to make sure they're represented appropriately. And I have not seen you-all's draft. And like you said, it's a guideline. But I just want to make sure we -- if there's something that we can nip in the bud

before it goes out there so you don't have to go through the process of more interpretations or more changes.

CHAIRMAN MORELOCK: I agree with that.

MR. TOTH: Okay.

CHAIRMAN MORELOCK: I agree with that.

MR. TOTH: All right. Well, thank you very much.

CHAIRMAN MORELOCK: Thank you.

MR. BAUGHMAN: Thanks, Mr. Toth.

MR. TOTH: You're welcome, sir.

CHAIRMAN MORELOCK: All right. So with that said --

MR. BAUGHMAN: Yeah. So that was great discussion.

CHAIRMAN MORELOCK: So do I take out "dynamic" and leave "self-checking"? Or what's the Board's purview?

MR. BOWERS: I think that would be good, to take out "dynamic."

CHAIRMAN MORELOCK: Okay. Are you okay with that, Mr. Baughman?

MR. BAUGHMAN: I'm good with

"dynamic." And I still hold true with the self-checking. I think the self-checking -- I don't think we're going to get into an issue, nor do I think we've ever reviewed a variance that is hand fired or manually fired, in that case. I still feel like self-checking with the controls that are out there is limiting in that aspect to the extent of what we're looking to do with remote monitoring.

CHAIRMAN MORELOCK: Yeah, that's fair. So, I'll tell you what. I mean, this is just discussion. So what I'm going to do is I'm going to take "dynamic" out, leave "self-checking" in, and then if you all have a change of heart, you can make it a revision. We'll make it a proposed revision. Because in June -- I mean, what I can do is I can take it and clean it up. Since it's just a discussion item, I could send it to the board members and -- obviously, before the June meeting -- and just be ready to make any final revisions before we publish it. But we could vote it with revisions before we publish it, you know, as long as we all agree that we want those revisions.

We can vote it in June, clean it up

and publish it, you know? Are you-all good with that?

MR. BOWERS: Perfect.

CHAIRMAN MORELOCK: So I didn't have anything on page 5 of 5. Did anybody have any revisions on page 5 of 5?

(No verbal response.)

CHAIRMAN MORELOCK: All right. Hearing none, I'm going to go on to the checklist. And so on page 1 of 4, Item Number 2, I struck the word "computerized." And then when you look at page 2 of 4, when you come down to the black header, I struck the word "computerized" and "computerized remote monitoring system."

On page 3 of 4 --

MR. BAUGHMAN: I'll bring you back, real quick, to the same page.

CHAIRMAN MORELOCK: Okay. Go ahead.

MR. BAUGHMAN: On 2 of 4, coming down to Item 19 --

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: -- the computerized monitoring system.

CHAIRMAN MORELOCK: Yeah, thank

you. I missed that one, too.

MR. BAUGHMAN: It's okay.

CHAIRMAN MORELOCK: So that's a good catch. All right. Now, here's a question. Look at 21. Do we want to take out "dynamic"?

MR. BAUGHMAN: Yes, sir.

CHAIRMAN MORELOCK: Okay. We'll take out "dynamic" there.

MR. BAUGHMAN: And then question for further discussion, the "self-checking."

CHAIRMAN MORELOCK: Okay. All right. That's what we'll do. We can have that conversation.

Okay. Now when we go to page 3 of 4 -- and this is where I need you-all to tell me what you think. I started to create a whole nother section for the boiler attendant, and I thought there's really no need for that. So what do you think about changing "remote monitoring personnel" to put "remote monitoring and boiler attendant personnel," and let those check boxes apply to both based on -- because that's one of the things that we're seeing, even in the manuals. We just had that conversation with the manual we just reviewed, as far as the responsibilities of

the boiler attendant. Because we've only had remote monitoring personnel, and I think if we put requirements in there for the boiler attendant in the manual, that might resolve some of the questions that we always have. So I would revise the header to say "Remote Monitoring and Boiler Attendant Personnel." Are y'all okay with that?

MR. BOWERS: Perfect with me.

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: Yes.

CHAIRMAN MORELOCK: And then when you go down to 26, the same thing. "What training do the remote monitoring and boiler attendant personnel receive?" And then when you get down to 30(a) "Do the remote monitoring" and then add "and boiler attendant personnel have other duties?"

MR. BAUGHMAN: So I would just interject real quick. On 27 and 28, that would be assumed to be inclusive of both the remote monitoring and the boiler attendant. And the reason I say that, in the previous manual that we reviewed, they were doing both.

CHAIRMAN MORELOCK: Yes.

MR. BAUGHMAN: They had the remote attendant and the boiler attendant. And so I

would make that assumption, unless there needs to be further clarification.

CHAIRMAN MORELOCK: Okay. So do you think we need more than just the black header saying that this applies to both groups, the remote monitor and the boiler attendant, or do you want to spell it out for remote monitor and boiler attendant training and all that?

MR. BAUGHMAN: No. I think the simpler the better and the least amount of verbiage.

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: But just as long as there's clarification, who's responsible for their training, well, the PBX and security, maybe, by the PBX people and the boiler attendant through a different means.

CHAIRMAN MORELOCK: Absolutely, yes.

MR. BAUGHMAN: So however we word that to get clarification for us...

CHAIRMAN MORELOCK: You want to separate those two? Or do you want me to add words to just say who administers the remote monitoring and the boiler attendant training?

MR. BAUGHMAN: Yeah. I think that would work.

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: Do you?

CHAIRMAN MORELOCK: Yes. What about you, Mr. Bowers? What do you think?

MR. BOWERS: Yes, I agree. Yes, that's fine.

CHAIRMAN MORELOCK: So I'm going to add who administers the remote monitor, remote monitoring and boiler attendant training. So we'll have who administers the remote monitoring and the boiler attendant training.

MR. BAUGHMAN: Uh-huh. And additionally, that goes to -- would that go to 27 also?

CHAIRMAN MORELOCK: Yes, I can do that. I'll take out the word "their" and put the "remote monitor" and "boiler attendant."

MR. BAUGHMAN: Okay.

CHAIRMAN MORELOCK: Okay. Got that. And then, again, down at 30(a), do the remote monitoring and boiler attendant personnel have other duties. And then, if you come down to 34, does the manual include remote monitoring

personnel and boiler attendant other assigned responsibilities? And I can put that in the possessive tense. The boiler attendants' and the remote monitors' assigned responsibilities. Yea or nay?

MR. BAUGHMAN: Well, what I would do is probably take out the plural of personnels.

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: Make it does the manual include the remote monitoring personnel and boiler attendant other assigned responsibilities.

CHAIRMAN MORELOCK: Okay. I got it.

MR. BAUGHMAN: Yeah.

CHAIRMAN MORELOCK: I've got it.

MR. BAUGHMAN: I don't know if that's grammatically -- if any English majors are here, but...

CHAIRMAN MORELOCK: Okay. All right. Okay. So going to 4 of 4, Item 35, again, this says, "Does the manual include the remote boiler monitor or monitors and boiler attendants' duties for each shift on a day-to-day basis?" Yes? No?

MR. BAUGHMAN: Yes.

CHAIRMAN MORELOCK: Yes? Okay. And then we're going to have to add -- I was going to add this, obviously, before the comments. So when you get the 42, I was going to add -- oh, wait a minute, wait a minute, wait a minute. There's something else I've got to do here first. Wait. Let's go back up to 36.

MR. BAUGHMAN: Thank you.

CHAIRMAN MORELOCK: 36, we have -- we just wrestled with this in this last manual. Does the manual include a test of -- we've got the systems, the boiler water column, remote monitoring, and what I have added to that is I've added for (d) "positive check of low-water cutoff," and then add (e) "check of water in the boiler site glass," and (f) "check of the boiler flame and stack temperature if the unit is fuel fired." Is that good?

MR. BAUGHMAN: I like it.

CHAIRMAN MORELOCK: What say you, Harold? Is that too specific?

MR. BOWERS: No. That's fine. That's fine. That's good.

CHAIRMAN MORELOCK: Okay. All right. So I'm going to add that to 36.

MR. BAUGHMAN: I think that's great.

CHAIRMAN MORELOCK: Okay. All right. So now, then I'm going to add 43, also, under the emergency procedure remote monitoring station, I was going to put on line 43 to say, "Do the emergency stops," parenthetical, "e-stops, shut down all the boilers, local, or remote?" And then just yes or no.

MR. BAUGHMAN: That's great.

CHAIRMAN MORELOCK: But, like, for us, we would say no, in some instances, at Eastman, but that's not necessarily a bad thing. It's not going to get you in trouble.

MR. BAUGHMAN: No. And that's part of the -- I think that's part of the discussion that got tabled for the low-pressure boilers.

CHAIRMAN MORELOCK: Yes.

MR. BAUGHMAN: But it's a great question to ask, just to find out.

CHAIRMAN MORELOCK: Yes.

MR. BAUGHMAN: There is a spelling change on Item 42 flame under "displayed."

CHAIRMAN MORELOCK: Yes. Oh, yeah. Thank you. I see that.

MR. BAUGHMAN: We got your back, man.

CHAIRMAN MORELOCK: All right. Hey, I didn't put that in red, so I didn't type that in. All right.

So, then, the last thing is Item 44, "Carbon monoxide monitors alarm at the remote station." Yes or no.

MR. BAUGHMAN: Yes.

CHAIRMAN MORELOCK: Yes. Okay.

MR. BOWERS: Yes, they are required now.

CHAIRMAN MORELOCK: Yes, it is required now.

MR. BAUGHMAN: Well, it's required for the boiler room, but I think that being that it's an integral alarm and that there's more deaths than injuries attributed to CO poisoning, that that needs to be enunciated back. It wouldn't make any sense to have such a valuable alarm not enunciated back to the station.

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: Especially, for any personnel that are being called to go in to that boiler room.

CHAIRMAN MORELOCK: Absolutely. I agree.

MR. BOWERS: So what you're saying, Dave, is if you get a variance, you have to go beyond what -- the carbon monoxide tester actually has to send a signal back to the control panel, right? Is that what you're saying?

MR. BAUGHMAN: Yes. It's got an alarm contact. And so that alarm contact itself, it's not an expensive device, but it -- so the ones you buy from Home Depot and Lowe's, you can get it with alarm contacts. Some states are even implementing it to the extent that not only does it enunciate, but it's actually interlocked with the boiler and it's shutting the boiler off.

Well, I've got problems with that because in a boiler room, it's not always the boiler that's producing the CO. It can be an air handling unit. It can be the water heaters and so forth. But Texas, in particular, is requiring it to be interlocked with the boiler.

I think, at a minimum, we should be enunciating back to the remote panel. And in the case that we don't have remote panels, we've got CO monitors that are virtually being implemented

across the board. I would like to have some type of additional alarms. Just food for thought and other discussions along the way. But being able to have an alarm is one thing; being able to -- Texas, in particular, dictates how often that alarm gets tested and how often it gets replaced along with mandating the proper installation of that alarm.

And what we're asking is that alarms be put in, but there's no education on how those alarms are supposed to be in. Do they go up in the ceiling? Do they go on the floor? People get confused on CO2 alarms versus CO alarms, and they get installed totally different. So there's a -- I think there's education we need to put out in the industry when it comes to implementing these also.

MR. BOWERS: Well, I think we made a good first step. You know, we made a good -- you know, at least we got them out there. But I like your idea. If you're going to go through the trouble of getting the variance and you're going to go through the trouble of putting in the control panel, you might as well tie that alarm back to the PBX station or something like that.

Because you've already got the expense anyhow of putting in the controls, and it's not that big a deal to add one more sensor, going and telling, hey, you've got a carbon monoxide problem down in your boiler room. I think it's a good idea.

CHAIRMAN MORELOCK: Well, we just need to see if it's going to be a lot of pushback from users. But you're right, they've got to put the monitors in. I don't know if we'll get any pushback or not, but that was a comment that was sent to me, so I put it in the checklist.

MR. BOWERS: Well, the problem is going to be, you know, we're going to require it for new variances.

CHAIRMAN MORELOCK: Yes.

MR. BOWERS: Now, we have a lot of variances out there that don't have that tied into that, which would be a large additional expense of people to do it afterwards. So I think, you know, it ought to be grandfathered in until they make a technical change. Then just say, well, to get a new variance or get it renewed after a technical change, then you've got to bring it up to the new standards that we have going forward, right?

CHAIRMAN MORELOCK: Well, and even

if they've got an old variance, they still had to put the CO monitors in, because that's been mandated, right?

MR. BOWERS: But does it have to be tied into the remote system?

CHAIRMAN MORELOCK: And I agree. So it might be -- just think on that and see how we need to word that. I mean, we could put something in there that just says that you need to have carbon monoxide monitors, and you could leave the "at the remote station" off, if you think that's prudent. Or we can put "at the remote station," so --

MR. BOWERS: Well, I --

MR. BAUGHMAN: I get looking at what we're charged with, and that, of course, is safety of the public.

CHAIRMAN MORELOCK: Yes.

MR. BAUGHMAN: And for me, if that alarm goes off and let's say like what we were talking about in our previous manual, they've got the security officer that's going to go back into the boiler room, colorless, odorless, tasteless, and he's walking into a situation that can be potentially deadly --

CHAIRMAN MORELOCK: Yes.

MR. BAUGHMAN: -- so we've got to look at what the cost implication is versus the safety implication, and I know that we talk about, you know, grandfathering things in and CSD-1 and other things, you know, getting grandfathered until there's a repair done. But, you know, that old 1950 boiler that's still operating and hasn't had any control updates and what have you, and we say, well, you know, it hasn't had any repairs or updates, so it still meets the code. To me, that's an interesting discussion, but I would advocate for it to be tied into the remote monitor.

MR. BOWERS: But we're only talking about variances. If we're talking about all the new variances, we'll have it tied in. And in the old variances, you could say, well, any time you get a renewal, you have to tie that in, or you can say any time you make a technical change, you have to go back before the Board.

CHAIRMAN MORELOCK: Right.

MR. BOWERS: Then you've got to tie that in.

CHAIRMAN MORELOCK: Yeah.

MR. BOWERS: You could do it several different ways.

MR. BAUGHMAN: I agree. You can.

CHAIRMAN MORELOCK: Well, I mean, it's just like with the age Eastman is, any vessel that was built prior to July 1, 1955 is grandfathered. And we've got some, you know. So there you go.

MR. BAUGHMAN: We're replacing a -- we've got a boiler in Louisiana that's being replaced. It's still operating, but they've mandated its replacement. 1905, and it's still old, riveted, and still operating.

Which that brings me to this next item, which we discussed, or at least it was put in for the discussion on the checklist, was that -- wood-fired boilers. So we've got automatic-fired boilers that are above 5 horsepower, above 50 square feet of heating surface operating at above 15 psi but how are we applying the variance to those particular systems? And it's a question that's been asked, and I haven't had a definitive answer. So I just wanted to kind of bounce that around, if that's something, Mr. O'Guin or Mr. Bowers, that you know

about or seen applications of with the variance. I don't know.

MR. BOWERS: Well, I don't know if we even have any variances on any wood-fired boilers that I'm aware of. Now, Chris can update that for me. A wood-fire boiler takes a lot more attention, a lot more attention. And --

CHAIRMAN MORELOCK: Well, what about Jack Daniel's?

MR. O'GUIN: Yes, sir.

CHAIRMAN MORELOCK: Is that it? And does Domtar have a wood-fired boiler? No, no, no. They've got a black liquor boiler. That's what they've got.

MR. O'GUIN: Right.

CHAIRMAN MORELOCK: But Jack Daniel's has got a variance for a wood-fired, don't they?

MR. O'GUIN: Yes, sir.

MR. BAUGHMAN: I thought the variance applied to their gas boilers they've got down there, the Nebraska and the other gas-fired. You're saying that it actually applies to their wood-fired?

CHAIRMAN MORELOCK: Well, I don't

know. You may be right about that. I don't know.

MR. O'GUIN: The variance request they got three or four years ago was to the Nebraska, but they also had a variance for the wood-fired.

CHAIRMAN MORELOCK: Okay.

MR. O'GUIN: I had question about as far as how quick it would shut off.

CHAIRMAN MORELOCK: Okay.

MR. O'GUIN: And we actually watched it on video. It was seconds.

MR. BAUGHMAN: And so that's my question to get clarification on. Does it apply to wood-fired boilers? Yea or nay. And does it apply to electric Section 1 boilers that are above 5 horsepower and operate above 15 psi? Because I haven't -- and, of course, we know in this industry it's a very segregated application of this code. I don't think I've seen the first dry cleaner with a variance. I haven't seen -- I haven't seen a lot of boilers. It's a code that's been segregated in its application and enforcement.

So with that, when I go in and talk to somebody, I would like to know definitively if,

in fact, this electric boiler needs to be looked at from a variance standpoint, that they're operating without anybody there. And the same thing with the wood-fired. Wood-fired is typically -- they've got operating personnel. You're right. It takes a higher amount of expertise to operate that wood-fired boiler.

But there's still some automatic wood-fired I looked at over in Middle Tennessee, and they brought it up. They brought me in for a discussion. And if I'm not mistaken, Eugene was the inspector at the time. And we discussed it. And so I'm still kind of interested to know definitively if that's to be applied or not.

CHAIRMAN MORELOCK: Well, but the question to me is do you have electric boilers on the 20-minute rule right now? I mean, that's the only reason you need a variance, right?

MR. BAUGHMAN: Uh-huh. Let me just say that I know there are boilers that are running that aren't being attended to every 20 minutes.

CHAIRMAN MORELOCK: Well, so there you go.

MR. O'GUIN: I did have a question about Number 44.

CHAIRMAN MORELOCK: Okay.

MR. O'GUIN: If we do require that to be integrated with the alarm system back to the remote station, then we probably need to go back and change the Inquiry 6 on that interpretation. Is it required for the CO detector to be hardwired electrically? And our reply was no.

CHAIRMAN MORELOCK: That's a good point.

MR. O'GUIN: I'm asking the Board this question.

CHAIRMAN MORELOCK: Well, like I said, that was a comment that I received, and I put it in the checklist. I'm not saying we've got to do it, but we just need to think it over and see what we -- how we want to handle it.

MR. BAUGHMAN: Yeah. The only thing that's specifically hardwired back to the remote panel is the e-stop.

CHAIRMAN MORELOCK: Yeah.

MR. BAUGHMAN: And so they can enunciate as much as what they want back to wherever the panel is at, but ultimately it's the alarm that gets enunciated that they hit with the e-stop. So the enunciation can be made in various

forms, whether that be hardwired or whatever the case may be.

I thought it was interesting when we were at a job site a few weeks ago in East Tennessee, when their computer system got hacked. It had ransom wear and it shut the place down solid. And so I was there, going through the training aspect of the variance, and I thought, man, this is great. This is going to, you know, be able to tell whether it's web-based or not and what have you. And it wasn't. So it didn't affect the variance itself. But it made me wonder -- and that's why I'm interested in knowing what the hardware capabilities are -- is are the enunciations made via internet connections or are they made via telephone connections?

But it was interesting, because if it had been via internet, and even intranet, inside their own system, all that was flat out shut down. So the boilers would have enunciated on their own but they wouldn't have kicked it back to tell anybody.

So I don't know how that figures into our checklist. This only came up a handful of weeks ago. But I was interested to kind of bring

that up for discussion. Because if our enunciations are back, tied in -- we talk about from a security standpoint, can it be hacked, you know, the password protected and so forth. But that all gets back to communications and really via internet, kind of, capabilities.

CHAIRMAN MORELOCK: Well, just think about that CO item. It's not set in stone. It's just a comment that I got and I incorporated it. So let's think on that and I'll get this cleaned up and get it out to you early enough to where you can send me some comments back before the June meeting.

MR. O'GUIN: I have one more comment before we close, Chairman.

CHAIRMAN MORELOCK: Okay.

MR. O'GUIN: Should we include -- or I may have missed it -- requesting the e-stops be hardwired back to the remote? Did I miss it somewhere in here? I know we've had remnant of that issue in the past.

CHAIRMAN MORELOCK: I thought it was already in there.

MR. BAUGHMAN: I thought so, too.

MR. O'GUIN: I thought we were

going to try to integrate it in here.

CHAIRMAN MORELOCK: I thought we did. Let me look again.

MR. BAUGHMAN: I don't see it.

CHAIRMAN MORELOCK: Well, I'm going to add that. Do you want to make that 45?

MR. O'GUIN: I assume that will be fine.

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: Good call.

MR. O'GUIN: How do you want to word that, Chairman?

CHAIRMAN MORELOCK: Yeah. I'll word it up.

MR. O'GUIN: Okay.

MR. BAUGHMAN: I'd probably suggest to put Chris wants to know if the e-stop is hardwired.

CHAIRMAN MORELOCK: And you want that back to the remote station?

MR. O'GUIN: That's how we have been approving the variances. And that was kind of the question I had, if, you know, we're going to stay true to --

CHAIRMAN MORELOCK: Well, I really

thought we had that somewhere.

MR. O'GUIN: I don't think it's in the guidelines anywhere in the paragraphing, either.

CHAIRMAN MORELOCK: Let's see. Well, I'm burning your-all's time. I'll research it. I'll make sure to put something about e-stops in there and I'll send it out to you. Very good?

MR. O'GUIN: Yes, sir. Are we going to keep this as a discussion item or do you want it to be an agenda item for June?

CHAIRMAN MORELOCK: Let's keep it as a discussion item, with STERIS coming back.

MR. O'GUIN: Okay.

MR. BAUGHMAN: So in this -- and I had made one note, too, just quickly. This goes back to page 3 of 5 under the introduction. And one of the questions came up -- it says under paragraph (a), a power boiler having a rating of either 5 horse or 50 square foot and so on. So it doesn't state if it's operating above 15 psi in that particular statement. And the questions come up on a power boiler, Section 1 power boiler, that is operating under 15 psi.

And I've gotten some different

replies on that. But if the boiler itself is operating under 15 psi, even though it's a Section 1, does it have to meet the requirements of that 20-minute rule or apply for the remote variance?

CHAIRMAN MORELOCK: Well, but I think you're going to have to go to Section 1 PG-2 maybe, because it says -- PG-2.1 says the rules of this section are applicable to the following services: (a) boilers in which steam or other vapors is generated at a pressure more than 15 psi for external to itself. And then high-temperature water boilers intended for operation at pressures exceeding 160 psig and above 250 F.

MR. BAUGHMAN: So according to that statement, if they're operating below 15 psi --

CHAIRMAN MORELOCK: It's not a power boiler.

MR. BAUGHMAN: It's not a power boiler. Even though it's an S-stamped boiler, it's operating below those parameters.

CHAIRMAN MORELOCK: Yeah. It's going to fall in to one of those other categories like a miniature boiler or something like that.

MR. BAUGHMAN: Well, let's say it's

a hundred horse boiler and it's got 500 square feet of heating surface, it's rated at 150 as a power boiler, section 1, but it's operating under 15 psi. The controls are set -- let's say the controls are set to 11 psi, high limits, so forth. So it's operating under those jurisdictional requirements, and that's why I just was looking for, you know, any clarification on that.

In our rules, it just states a power boiler. It doesn't say a power boiler operating at above 15 psi. Or does it? Maybe I'm missing that.

MR. O'GUIN: It goes by the horsepower and the square footage, is what it goes by.

MR. BAUGHMAN: Okay. So there might need to be some clarification at some point to add if it's operating at or above 15 psi, because, otherwise, we're taking some high-pressure boilers, and whether they're operating at above 15 psi or not won't matter; they'd have to fall under that requirement.

CHAIRMAN MORELOCK: Well, and that would be a rule change to 800-03-03.

MR. O'GUIN: Yes.

CHAIRMAN MORELOCK: That wouldn't be a change to the guidelines.

MR. BAUGHMAN: Okay.

CHAIRMAN MORELOCK: That would be a change to the rule.

MR. BAUGHMAN: Well, and I guess I'm just asking for clarification on it, too --

CHAIRMAN MORELOCK: Yeah.

MR. BAUGHMAN: -- and whether or not it -- I don't know how a rule gets changed or amended or augmented or whatever the procedure is, but I just know that that question has been brought up. And my response has been as long as it's not operating above 15 psi or producing steam or vapor above it, then it doesn't fall under the requirements. But that doesn't meet the letter of how the code states. It just says a power boiler.

CHAIRMAN MORELOCK: Yeah.

MR. BAUGHMAN: So for whatever that's worth, I wanted to bring that up.

CHAIRMAN MORELOCK: Something to look up. We'll look at that.

MR. O'GUIN: If it's below 5 horsepower in 50 square foot, Mr. Baughman, we don't enforce the 20-minute attendant rule.

MR. BAUGHMAN: Right. And I understand that. What I was getting at was if it's above that and it's operating below 15 psi steam. So that was where my clarification needed to come from.

MR. O'GUIN: If it's got the controls and the safety valves, if the controls are changed plus the safety valves are changed in it, then it would not have to meet that 20-minute attendant rule. But it has to have the controls changed as well. They can't just change the safety valve because then they could swap a safety valve out.

MR. BAUGHMAN: I agree.

MR. O'GUIN: That's how we inspect at WRC.

MR. BAUGHMAN: Okay.

CHAIRMAN MORELOCK: Okay. Very good.

MR. BAUGHMAN: Thanks, Chris.

CHAIRMAN MORELOCK: All right. So we are finally on Item 10. I know you-all are excited to know that.

Unless the Board decides otherwise, the next regularly scheduled meeting of the Boiler

Board Rules will be 9:00 a.m., June the 9th at the State of Tennessee Department of Labor and Workforce Development building. Which I hope that's a true statement. If not, we'll do this again.

MS. BENNETT: Well, we'll keep you informed. The governor's mandate goes to the end of April, I think. And then it will be subject to renewal.

CHAIRMAN MORELOCK: Okay. Well, before I adjourn, thank you-all for hanging in there. I know we had a lot of stuff to talk about and you-all have been very faithful, and I appreciate that.

I want to thank everybody for setting the Zoom meeting up and putting up with my East Tennessee English and forgetting people's names and all that stuff. But it's good to see you even if it's through Zoom, and so I hope you-all have a good rest of the week. And I hope to see you face-to-face in June. If not, we'll do this.

And we are adjourned.

END OF THE PROCEEDINGS.

C E R T I F I C A T E

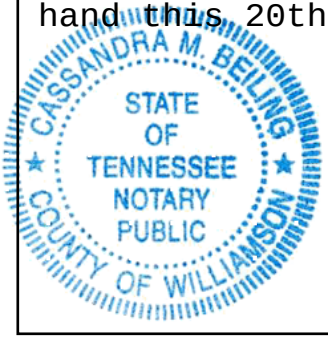
STATE OF TENNESSEE)
COUNTY OF WILLIAMSON)

I, Cassandra M. Beiling, a Notary Public in the State of Tennessee, do hereby certify:

That the within is a true and accurate transcript of the proceedings taken via Zoom videoconference before the Board and the Chief Inspector or the Chief Inspector's Designee, Tennessee Department of Labor & Workforce Development, Division of Workplace Regulations and Compliance, Boiler Unit, on the 10th day of March, 2021.

I further certify that I am not related to any of the parties to this action, by blood or marriage, and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 20th day of April, 2021.



Cassandra M. Beiling, LCR# 371
Notary Public State at Large
My commission expires: 3/10/2024

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