FOR THE CASE OF
Department of Labor

TRANSCRIPT OF
Quarterly Meeting
March 21, 2018
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STATE OF TENNESSEE

DEPARTMENT OF LABOR AND WORKFORCE DEVELOPMENT

BOARD OF BOILER RULES

QUARTERLY MEETING OF THE
STATE BOARD OF BOILER RULES

March 21, 2018

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Brian R. Morelock, Chairman
Owner-User Representative

David W. Baughman, Board Member
Owner/User Representative

Harold Bowers, Insurance Representative

Terry Fox, Boilermaker Representative

Sam Chapman, Chief Boiler Inspector

Chris O'Guin, Boiler Inspector

Kim Y. Jefferson, Esq.
Administrator, State of Tennessee

Dan Bailey, Esq.
Legal Counsel, State of Tennessee

Lynn Kirby
Board Secretary, State of Tennessee
INDEX

Attached at end:
Public Notice
Meeting Agenda
Meeting Sign-in Sheet
PROCEDINGS

CHAIRMAN MORELOCK: Good morning, everybody. I want to welcome you to the March quarterly meeting of the Tennessee Board of Boiler Rules, and glad to see everybody here and they didn't have any weather-related issues. I'm glad everybody got here safe and sound.

We do have agendas on the back table and a sign-in sheet as well, so make yourself available to that. We do have some refreshments in the back as well.

I want to call this meeting to order. And in doing so, we'll begin with introductions and announcements. So I'm going to begin with our court reporter, Elisabeth.

THE COURT REPORTER: I'm Elisabeth Lorenz.

MS. KIRBY: I'm Lynn Kirby, board secretary.

MR. O'GUN: Chris O'Guin, deputy inspector.

MR. CHAPMAN: Sam Chapman, chief inspector.

MR. BAUGHMAN: I'm Dave Baughman, board member.
CHAIRMAN MORELOCK: Brian Morelock, board member.

MR. BOWERS: Harold Bowers, board member.

MR. FOX: Terry Fox, board member.

MS. JEFFERSON: Kim Jefferson, assistant commissioner.

MR. BAILEY: Dan Bailey, legal counsel.

MR. KURLE: Don Kurle, Becht Engineering.

MR. ESKRIDGE: Chip Eskridge, Jacobs Engineering.

MR. PISCHKE: Mike Pischke, National Board.

MR. TOTH: Marty Toth, Boisco Training Group.

MR. HORTON: David Horton, Jack Daniel Distillery.

MR. COLLINS: Clint Collins, Jack Daniel Distillery.

MR. ROTH: Denis Roth, Jack Daniel's.

MR. HOUSTON: Ansley Houston, Rinnai America.

MR. KNOBLETT: Michael Knoblett, Rinnai America.
MR. WOOD: John Wood, Sunbelt Marketing.

MR. PAULEY: Brian Pauley, Dow Chemical.

MR. BYRD: Wes Byrd, Dow Chemical.

MS. RHONE: Deborah Rhone, Boiler office supervisor.

MR. GOODWIN: George Goodwin, comptroller of the Treasury.

MS. MALONE: Christine Malone, comptroller of the Treasury.

MR. ORMANOSKI: Kevin Ormanoski, Nucor Steel, Memphis.

MR. SIMPSON: Rob Simpson, Nucor Steel, Memphis.

CHAIRMAN MORELOCK: All right. Again, welcome. I'm glad you're here.

Our next item is adoption of the agenda. I just have one item here to report on. Item 18-04, Holliston Holdings, they had sent a note to the state of Tennessee requesting to have this item removed from the March agenda, and they'll bring that back hopefully at the June meeting.

So 18-04 will be -- will not be handled today. We'll move that out to the future agenda.
Are there any other additions or corrections to our current agenda?

Okay. Hearing none, do I have a motion to accept our agenda?

MR. BAUGHMAN: So moved.

CHAIRMAN MORELOCK: Second?

MR. BOWERS: Second.

CHAIRMAN MORELOCK: All in favor say aye.

In Unison: Aye.

CHAIRMAN MORELOCK: Opposed, abstentions, not voting? Okay. We have an agenda. Our next item is approval of the December 13, 2017, meeting minutes. Those have been published on the website.

And so are there any questions or corrections to the December minutes?

All right. Hearing none, do I have a motion to accept these minutes?

MR. BOWERS: Motion to accept.

CHAIRMAN MORELOCK: Second?

MR. BAUGHMAN: Second.

CHAIRMAN MORELOCK: Any discussion?

All in favor say aye.

In Unison: Aye.
CHAIRMAN MORELOCK: Opposed, abstentions, not voting? December minutes have been approved.

That will take us to Item V, which is the chief boiler inspector's report.

MR. CHAPMAN: Thank you, Chairman.

Members on an inspection, state inspector is 2,564; insurance agency, 4,752; giving us a grand total of 7,316.

Total delinquent inspection is -- out of Bessell is 65,000 -- excuse me, 68,941. State inspector is 1,724; insurance agency, 452, those are for the delinquent reports; giving us a total of 1,676.

Number of code violation is 12; uncorrected was 9.

The variance report, Chris O'Guin will be giving information on that.

CHAIRMAN MORELOCK: Okay.

MR. CHAPMAN: Business report from October through December 2017.

CHAIRMAN MORELOCK: Okay.

MR. CHAPMAN: That's the chief report.

CHAIRMAN MORELOCK: Any questions or comments about the chief's report?
Okay. Thank you, Mr. Chapman.

MR. CHAPMAN: You're welcome.

CHAIRMAN MORELOCK: We'll have our deputy inspector's report.

MR. O'GUIN: Thank you, Chairman.

As of today on the variance report, we have 116 known variances; 9 require a follow-up inspection; 52 have been verified and approved; 8 require a reinspection; 47 are dormant.

As of this quarter, we have completed 15 variance audits with 12 approved and 3 requiring a follow-up audit.

CHAIRMAN MORELOCK: Okay.

MR. O'GUIN: PML, Vi-Jon, and Nucor were rejected at this point.

CHAIRMAN MORELOCK: All right. Any questions about the deputy inspector's report?

Yes, sir.

Let me just -- when you speak, please, make sure it's loud enough that us old people can hear it and certainly the court reporter can record it. Please introduce yourself.

When you come up to present an item, same protocol, introduce yourself and make sure you speak loudly so we can get your words properly
captured in the minutes.

Yes, Mr. Toth.

MR. TOTH: Marty Toth, Boisco Training Group.

May I ask what three were rejected and why?

MR. O'GUIN: PML was rejected due to training. E-stop wasn't installed. Excessive response, like 8-1/2 minutes.

We had Vi-Jon rejected. Update required of recall list. Recall list was incorrect. Post new colored recall list.

Nucor was rejected due to no audio alarm, no E-stop, and the training.

MR. TOTH: Thank you.

CHAIRMAN MORELOCK: Okay. Yes, sir.

MR. ORMANOSKI: Kevin Ormanoski with Nucor.

Rejections, what is the difference between the rejection and the reinspection? When is that scheduled for?

MR. CHAPMAN: I'll answer that one.

As far as being a rejection on it, it was due to the fact that training wasn't there.

Then once y'all give us a call again
that y'all have taken -- because we did send a
letter out on what we found.

Once all that has been corrected and
you contact us, we will put you back on the list to
come back and do a reinspection.

MR. SIMPSON: Rob Simpson, Nucor Steel,
Memphis.

For the record, we did receive that
letter. Those items have been corrected. We're
here today with multiple copies of our revamp
variance report. E-stops have been installed.
Training is underway. We're ready for inspection
when you are.

MR. CHAPMAN: Oh, okay. We didn't know
that because there hasn't been anyone that notified
us of that.

MR. SIMPSON: Understood. That's why
we're here.

CHAIRMAN MORELOCK: Very good.
Any other questions or comments?
Very good report. We certainly
appreciate you coming and sharing that with us
today. That's great information. Excellent,
excellent.

Before I move into old business, I did
want to take just a minute and give us a safety --
quick safety topic here. And just so you're aware,
in the event that we'd have an emergency or natural
disaster in the building or nearby, we do have
security forces and security personnel that would
help the attendees to a safe place, whether inside
the building or direct them to exit the building on
the Rosa Parks side.

Just be aware of that. I wanted to
make sure you were aware of that. If we have to
take any safety measures.

The other item too is as we get into
discussion of our new -- old business and new
business items today, again, when you come forward
to present your item, make sure you introduce
yourself. Speak clearly and loudly enough to convey
your information.

Also, out of respect for the
presenters, I would ask everyone to silence your
cell phones so that way there won't be any music or
ring tones or things going off while they're making
their presentations.

Moving on to Item VII, which is Old
Business, we do not have any old business.

Moving on to Item VIII, which is New
Business, our first new item is Item 18-01, Dow Chemical Company. And they are here to present a -- one vessel to be designated as a Tennessee Special. So if you'll step forward and present your item.

MR. ESKRIDGE: I'm going to be handing out a supplement to our submittal that we provided 45 days in advance. I'm not sure -- you have that, I see.

I'm Chip Eskridge, E-S-K-R-I-D-G-E. So introducing ourselves, I'm Chip Eskridge with Jacobs Engineering.

MR. PAULEY: And I'm Brian Pauley, senior project manager for Dow Chemical located at Knoxville.

MR. KURLE: Don Kurle, K-U-R-L-E, with Becht, B-E-C-H-T, Engineering, working out of Jacobs' office.

MR. BYRD: Wes Byrd, B-Y-R-D, and I'm a piping mechanical engineer with Dow.

CHAIRMAN MORELOCK: Before you present your item, I would ask that -- the board members if there's a conflict of interest on this item?

All right. There is none, so you may proceed.
MR. ESKRIDGE: All right. Per the regulations, we had submitted a package 45 days in advance of this meeting, which many of you have. I have an identical -- two identical copies of what you received.

Again, I handed out a supplementary attachment to that.

What -- I'll start it off. I'll -- what we have basically is a German-built vessel. It's -- Tennessee requires an ASME-stamped vessel. But more and more the world is getting more international, so -- especially the automobile plants here. You're probably seeing Japanese-built equipment here.

So we have a German-built vessel that's going to operate at Knoxville as a -- as a -- as a -- it's actually not going to be in service, but it's an emergency -- in case of emergency would happen, they would put a chemical in it to inject it to reactor.

I'll let Brian here explain the process. And then Don's here, who sits on the ASME code, to talk a little bit about the calculations we did to show equivalency to ASME. And Wes is the engineer representing Dow that knows about the
contents of this.

    I'll turn it over to Brian first to talk about the process.

    MR. PAULEY: Yes. This is -- this is the ninth layer of protection for any runaway polymerization on two of our acrylates and two of our acids, which are -- they react to caustics or any types of bases.

    So the cart itself is normal in our line of business. As a matter of fact, it was originally designed by BASF. We bought it as a shelf item in Germany so that we could put it onto the job site.

    It will remain empty unless there is a runaway polymerization. In that case, we'll put phenothiazine in the vessel, and we will inject it into the tanks that have the runaway reaction.

    Runaway reaction takes about 48 hours, so it's not anything very abrupt. We don't have to really rush it, but we do need to stop the reaction if we can. So it will remain in a shed hopefully. We haven't used it in 38 years, and hopefully it will last a lifetime because it is the last layer of protection, the last line of defense. And we have eight more lines of defense in front of it, so...
MR. ESKRIDGE: Let me -- this was handed to -- the package was handed to all y'all. Here is what the vessel looks like on a skid, and here is a schematic of how it works.

There's a reactor. If necessary, they can inject this inhibitor into the reactor. The idea is that it will never, ever have to be used. In fact, in, what, 30 something years --

MR. PAULEY: 38 years so far.

MR. ESKRIDGE: Being the Dow plant is in the Knoxville area and it's a high populated area, they've added another layer of a way to shut down what's called a runaway reaction.

Anyway, this is in Section 1 of the submittal. This is exactly what it would look like sitting there empty. Hopefully never have to be used.

Thank you, Brian.

So -- go ahead.

MR. PAULEY: He has a question.

MR. BOWERS: Comment.

Is the purpose of this -- because you have the media, I guess, that goes in here, right, on site?

MR. PAULEY: Yes.
MR. BOWERS: Is the purpose of this to make it more mobile?

MR. PAULEY: It's to make it more mobile, and it allows us to inject into the unloading system of these tanks so that we can inject air and the PTZ into the tanks.

MR. BOWERS: So it's also mobile and provides equipment to inject this thing.

MR. PAULEY: That's correct. It's got an AOD pump, a diaphragm pump that will inject air and PTZ into the vessel.

MR. BOWERS: Okay.

MR. ESKRIDGE: Any other questions up to now? That's the process.

And the reason this was German vessel is -- think of this as somewhat like a fire extinguisher. The company that makes this product makes a system.

So if you buy a fire extinguisher from a company, they're going to charge it. They're going to provide their fire extinguisher to certify that this is a UL fire extinguisher. This was built by a company similar to UL in Germany called T-U-V, TÜV. So they provide a certification to this.

So if we change the vessel out, it
could impact the certification of their system,
which has liability there.

CHAIRMAN MORELOCK: So could you just
give the board a brief presentation on how you
compared the design of the vessel to AD-Merkblatter
2000 to the current requirement in Tennessee rule to
satisfy ASME code requirements.

MR. ESKRIDGE: Chip. I'll let you do
that, Don.

MR. KURLE: Don Kurle. I'm sorry.

We looked at how the vessel was
fabricated, all the information, the inspections and
examinations that were done to the vessel. We then
supplied the Codeware COMPRESS program to do the
calculation, which does ASME Section VIII Division 1
calculations.

So we did that, which is the report
that's attached to the supplement here.

We found initially -- in the initial
report you had, we had two issues. One was hand
hole or inspection opening did not meet the same
requirements for opening reinforcement that ASME
has. It met the AD-Merkblatt, but it didn't meet
ASME. There's just little differences in the rules.
Very minor, but it just caused it enough to not
Since then, we discussed with the Dow people, and we reduced the pressure from 16 bar to 14.5 bar, and that took care of that issue because there were plenty -- opening reinforcement doing that.

We also applied Code Case 2695, which allows us to go to the Div 2 rules still using the Div 1 allowable stresses and all of that. But we were able to use it. And that is a pressure area methodology for opening reinforcement, which is very similar to what the Europeans use in the AD-Merkblatt.

It's a pressure area; whereas, the traditional Division 1 is an area replacement method. But we -- all of us in the -- in the engineering world in the pressure vessels feel that the pressure area is actually a better methodology. It's more engineering involved and everything. So anyway, that issue went away.

We still have one issue that -- it's called UG-45, the paragraph in Division 1. It has two parts to it. One is that the nozzle -- this -- this is the discharge nozzle. It's a two-inch nozzle coming out of the top head. It has a pipe
that goes down to the bottom.

That -- that nozzle meets the safety requirements of UG-45, which says that it has to be thick enough to handle the pressures. It meets that with flying colors. It's just like more than ten times thicker than it has to be for the pressure.

The other part of UG-45 is what we call a robustness factor. It's to prevent you from having small nozzles that are too -- I don't want to say too thin, that might not be the right word -- thin nozzles because these nozzles a lot of times are on sides of equipment, and people hang tools from them. They hang very large pieces of instrumentation from them. They use them for stepping ladders and things like that.

To prevent these things from bending, not for normal operation but from bending from abuse, the code has a requirement in there. And the basis for that is the thickness of standard weight pipe in the U.S. traditions.

These nozzle -- this particular -- all the other nozzles meet it without any issue. Just this one is just slightly thinner than what would be required for this robustness part, again keeping in mind the safety part is no issue.
And the German -- the European
schedules and stuff like that are slightly different
for their thicknesses than the U.S. thicknesses. It
does meet the minimum thickness for the German
standard weight, but it doesn't meet the one for the
U.S.

But this nozzle is in the top head. It
is piped up. It has piping. There are no piping
loads on it, any significant loads. It's
essentially attached to the -- to the skid and
everything like that.

So there's really no unusual loads or
anything that would cause any issues with it.

With that, we submit that, you know,
this is a safe vessel, safe as a Section VIII
Division 1 vessel.

CHAIRMAN MORELOCK: Do I have a motion
for discussion from the board on this item?

MR. BAUGHMAN: Yes.

MR. BOWERS: Second.

CHAIRMAN MORELOCK: I'm going to open
the floor for question, comments.

Anybody have question or comment?

MR. BAUGHMAN: Yes.

What -- what pressure does the unit
actually operate at? What do the nozzles need for proper operation?

Mr. Pauley: Well, we're -- right now we've -- we've set the pressure relief at 210 psi. It operates around 150.

Mr. Eskridge: Yeah, 150.

Mr. Kurle: And the nozzle design was done at the 14.5 bar, which is 210 -- essentially 210 psi. So it was done at the MAWP of the vessel.

Mr. Baughman: In reducing it from 16 bar to 14.5, the unit will still operate properly?

Mr. Pauley: Yes, sir.

Chairman Morelock: Well, I will -- while you're thinking, I will state that I did go through the COMPRESS model, had some conversations with these gentlemen, and we worked out -- and we went through all the radiography requirements, the calculations, the discrepancies.

To put this in perspective, they do have a very small concern on that one nozzle in a new construction code.

But evaluating this as a completed vessel that's been certified by the German code, and we're now trying to place a new code to it in a postconstruction situation, if we did a fitness for
service on this nozzle per API 579, it would pass.
So I don't have any reservations.

I think Mr. Kurle has addressed it correctly. It's just the nuances between the German code and ASME code that they're wrestling with.
That's my comments on this. It is a safe vessel.

MR. ESKRIDGE: If I could add. That one nozzle on the top that we're talking about that actually the product discharges up and out, the ASME code would require a wall of 3.4 millimeter, and they have 3.2 millimeter. So we're off .2 millimeters, which is about the thickness of a piece of paper, the wall thickness.

CHAIRMAN MORELOCK: So I want to open it up now.

Are there any questions from the audience? Hearing none, do I have a motion from the board to approve this vessel as a Tennessee Special?

MR. BOWERS: Motion to approve.

CHAIRMAN MORELOCK: Second?

MR. BAUGHMAN: Second.

CHAIRMAN MORELOCK: Any more discussion?
Hearing none, all in favor say aye.

In Unison: Aye.

CHAIRMAN MORELOCK: Opposed, abstentions, not voting? You have an approved Tennessee Special.

I will add to the minutes to make you aware of the requirements of a Tennessee Special, this vessel will be stamped as such. Any repairs, any repairs to this vessel will have to come through the boiler unit and the chief inspector.

Any alterations to the vessel will have to be brought back to the board. And we meet quarterly, so just bear that in mind. I know if you're in a shutdown situation and something comes up, if it's a repair, you'll get service. But if you have an alteration, we may have to talk, you know, so -- if it was a critical thing where you needed an emergency meeting or something like that.

Just bear that in mind as you move forward with it. I appreciate your time.

Now, the only question I have -- and y'all can talk about this offline.

If this vessel is sitting on your plant site inactive, does it need certificate of inspection because it's not being operated? Like I
said, I'm just throwing it out there. It's just come to mind.

Really the only time the vessel is going to be in operation is during an emergency.

And the other thing is, correct me if I'm wrong, but this vessel would be considered a noncorrosive surface. It's stainless steel, so your requirement to maintain a certificate of inspection would be an external inspection. Wouldn't have to have an internal. Just bear that in mind as well.

MR. PAULEY: Our GMIS requires us to inspect every vessel. This one will be on a five-year GMIS plan, and we will do the pressure relief device on a yearly basis.

CHAIRMAN MORELOCK: As long as it has a certificate of inspection on it and a Tennessee number, it will require inspection every two years unless you implement a risk base inspection program and extend that inspection frequency out.

Mr. Toth.

MR. TOTH: Marty Toth, Boisco Training Group. I may want to add, inspection by the state.

CHAIRMAN MORELOCK: Yes.

MR. TOTH: So there's no confusion at -- because they do their own inspections.
CHAIRMAN MORELOCK: That's true.

That's a good add, yes.

What was that? I'm sorry.

MR. TOTH: It has to be inspected by a state inspector or an insurance inspector licensed with the state of Tennessee, not just your inspectors.

CHAIRMAN MORELOCK: Thank y'all very much.

MR. PAULEY: Thank the board for your time.

CHAIRMAN MORELOCK: Our next item is 18-02, Parkridge Medical Center, and they are requesting a variance for two vessels.

Gentlemen, if you will come and introduce yourself and present your item, please.

MR. NEVILLE: Good morning. I'm James Neville with Neville Engineering.

MR. BUSCH: My name is Clem Busch. I'm the director of Parkridge Medical Center.

MR. NEVILLE: We're here today to request a variance for two power boilers.

Parkridge Medical Center is a hospital in Chattanooga, Tennessee. Our request is for two pressure boilers. These boilers are used on demand
24 hours a day, 7 days a week. They provide steam for sterilization, space heating, domestic hot water production.

The boiler room and the remote station is located at the PBX operator's station, which is shown on Figure 1. It's approximately 175 feet from the boiler room to the PBX operator's station.

As far as the individuals that will be monitoring this, it will be a PBX operator at the remote station. They will be trained as far as responding to boiler alarms and contacting the boiler attendant that's on duty for that shift.

The boiler attendants, as have been outlined in the manual, are the shift engineer and the security guard. The security guard will be doing monitoring activities, but they are trained as far as boiler operations.

The equipment that we list on here is a Cleaver-Brooks CB780E controller, and that is shown in the -- in Appendix B as far as under the equipment.

The details in Appendix A, there was some information we didn't have at the time of publishing on the deaerator. We do have a Tennessee number on the deaerator now. I can give that to you
now. That is T46414 on -- and that's Appendix A1.

If you would like to go through some of the training for the different positions as far as safety training on -- and boiler operations.

MR. BUSCH: Like with the engineers, is what I do, I do the training for them. They're taught chemical analysis of the boiler, how to test it and treat, what they're looking for. We have a chemical company that comes in. They have ratings that we're going to maintain through what they recommend.

They're taught the low-water cutoff, how it works. They're taught how to test the low-water cutoff. They're taught how to blow the boiler down. I usually have it done once a shift, once on the day shift for, like, ten seconds depending on the reading of the chemicals.

They're also blowing down the low-water cutoffs to make sure the boilers will shut off like they're supposed to. That's done every day.

They're taught where the emergency stops are. There's one in the boiler room, and there's also one in the PBX operator.

They're also taught where the main shutoff is. They're taught to switch the boilers
from oil to gas, which that only happens when the
gas company requires us, which is thankfully not
that often.

They're taught where all the steam
valves are shut off, where the feed water is, where
the feed water pumps are. They're taught how to
switch the pumps, and they're taught how to blow the
DA tank down.

CHAIRMAN MORELOCK: One quick question.

Is what you just said captured in this
manual? I don't know that I read that.

MR. NEVILLE: As far as the --

CHAIRMAN MORELOCK: His responsibility
shown on the org chart and the verbiage and the
training, I don't see that in the manual. What you
said is fine, but it needs to be in the manual.

MR. BUSCH: But security is only taught
how to shut the boiler off and how to take readings.
They're not taught how to blow the stuff down.

CHAIRMAN MORELOCK: As far as your
boiler attendant and boiler operator, what you just
told us the training for them, we need that captured
in the manual.

MR. NEVILLE: We can add that training
details to the --
CHAIRMAN MORELOCK: That would be very helpful. Thank you.

Is the training annual?

MR. BUSCH: Yes, sir.

CHAIRMAN MORELOCK: Okay.

MR. BUSCH: It goes with their evaluations I have to do.

CHAIRMAN MORELOCK: Pardon the interruption because I wanted to ask that question while it was fresh.

MR. BUSCH: That's fine.

CHAIRMAN MORELOCK: So continue.

MR. BUSCH: That covers all my maintenance people, but I do have one designated for day shift and one for afternoon shift.

MR. NEVILLE: Are there any questions?

CHAIRMAN MORELOCK: Are there any conflicts of interest from the board on this item?

Hearing none, do I have a motion to discuss this item?

MR. BOWERS: Motion.

CHAIRMAN MORELOCK: Second?

MR. BAUGHMAN: Second.

CHAIRMAN MORELOCK: I'm opening the floor up for any questions or comments.
Any questions or comments?

MR. BAUGHMAN: Sure.

CHAIRMAN MORELOCK: Okay.

MR. BAUGHMAN: So is this system hard wired to the security?

MR. NEVILLE: To the PBX operators, yes.

MR. BAUGHMAN: Which low water actually alarms back to the PBX?

MR. BUSCH: When the boiler trips down.

MR. BAUGHMAN: Which one?

MR. BUSCH: Both boilers.

MR. BAUGHMAN: No.

Which low water? There's a primary and a secondary. Which one actually alarms back over to the PBX?

MR. BUSCH: I have a McDonnell & Miller makeup, and it's just got one alarm on it.

MR. BAUGHMAN: Code requires two low-water cutoffs. So being that you're in charge of training --

MR. BUSCH: Yes.

MR. BAUGHMAN: -- and you're going through the training with these operators on how to test the low-water cutoffs, I would assume that

Provided by Stone & George Court Reporting (615) 268-1244
you'd know there's two low-water cutoffs on the boiler by code. The boiler has been inspected previously. These are 2005 year model boilers.

I'm interested to know which one of those alarms back to the PBX.

And you're saying that there's only one low-water cutoff, McDonnell & Miller.

MR. BUSCH: I'm looking at my boilers.

MR. BOWERS: I understand.

MR. BUSCH: Yes, there are two.

There's a small one and large one. The large one, McDonnell & Miller, is the one that activated. Then the smaller one, it's also McDonnell & Miller, shuts it down. There's two balls there. That's how they're tied in. They are tested by Combustion & Controls and the insurance company when they come out every year.

MR. BAUGHMAN: It leaves me some bit of concern that you're not extremely familiar with the unit itself being that you're the one that's also training them. And it still didn't quite answer my question on which one of those McDonnell & Millers is the one that's enunciating back to the PBX.

MR. BUSCH: Then I'll have to get you that information.
MR. BAUGHMAN: Thank you.

Also you said that there's two shifts of maintenance personnel?

MR. BUSCH: Yes.

MR. BAUGHMAN: What about the third shift? I take it we're running the boilers three shifts.

MR. BUSCH: Security is doing the monitoring of the boiler. They're coming in there, taking the readings.

CHAIRMAN MORELOCK: So if you had an alarm, would it just shut the boiler down?

MR. BUSCH: If there's an alarm, PBX would hit the kill switch inside there, and the boilers will shut down on alarms.

CHAIRMAN MORELOCK: Meaning you just wait for somebody to come in and --

MR. BUSCH: Then she would make phone calls. She'll call the -- either shift engineer or the man on call. Then it keeps working down to where it gets to me. Then we all come in.

But the boilers are shut down automatically then.

CHAIRMAN MORELOCK: Sorry, go ahead.

MR. BAUGHMAN: That's okay.
So if the boilers shut down, who diagnoses -- in other words, the boilers before they're started back up and reset, the trouble should be diagnosed before starting the boiler back up.

Who would do that diagnosis?

MR. BUSCH: The shift engineer, but we would leave that boiler down. We would switch to the secondary boiler until either I come in or the engineer comes in. And if it's something we don't know, we would call a company in, Combustion & Controls. They would do --

MR. BAUGHMAN: If both boilers just by chance happen to go down --

MR. BUSCH: Oh, God --

MR. BAUGHMAN: -- tell me what would --

MR. BUSCH: Murphy's law. The shift engineer again would be called. I would be called. We would troubleshoot to see what it is. If it's low water, why? Did a pump fail? Did a fuse blow? Did -- were McDonnell & Miller involved? We would check. And if it's something more than that, Combustion & Controls would be called in. They would do the troubleshooting from there.

MR. BAUGHMAN: Super. Okay.
CHAIRMAN MORELOCK: Yes, sir.

MR. BOWERS: Question I have, the third shift boiler get alarm, the PBX operator is there at third shift, correct?

MR. BUSCH: Yes. That's a 7/24 position. We have to.

MR. BOWERS: Do they shut the boiler down?

MR. BUSCH: They have a shutoff right there, yes.

MR. BOWERS: Who verifies -- there's no maintenance guy on third shift, correct?

MR. BUSCH: Correct.

MR. BOWERS: So who verifies the boiler actually shut down?

MR. BUSCH: Security would go back there.

MR. BOWERS: So he would go in that room and make sure that boiler is off?

MR. BUSCH: That boiler is off, yes.

CHAIRMAN MORELOCK: As we -- those are things you'll need to add to your manual just to make it clear, please.

Go ahead.

MR. BAUGHMAN: For your E-stop, when
you hit your E-stop in the boiler room itself, does it kill an individual boiler?

MR. BUSCH: Yes, sir. We have two of them.

MR. BAUGHMAN: One for each boiler?

MR. BUSCH: Yes, sir.

MR. BAUGHMAN: The same thing out at your PBX?

MR. BUSCH: Yes, sir.

MR. BAUGHMAN: One for each boiler?

MR. BUSCH: Yes, sir.

MR. BAUGHMAN: It's a hard-wired mushroom?

MR. BUSCH: Right. If you push it in, you have to pull it out to reset.

MR. BAUGHMAN: There's no reset off a computer screen or what have you?

MR. BUSCH: No, no.

MR. BAUGHMAN: We don't have the capabilities of doing any kind of remote reset, being that the control you've got has got that option, but we are not utilizing that option; is that correct?

MR. BUSCH: No, sir. No, sir.

CHAIRMAN MORELOCK: Any other comments?
I've got just a few. I have a basic question.

When I looked through this manual,

where is Page 1 and 2?

MR. NEVILLE: You should have -- and

that may have been a printing error.

CHAIRMAN MORELOCK: Because I have a

table of contents --

MR. NEVILLE: Do you have Current

System Description, Page 1? You do not have that?

CHAIRMAN MORELOCK: I have Table of

Contents, and then I have Page 3.

MR. NEVILLE: You don't have a site

plan either?

CHAIRMAN MORELOCK: I don't have

Page 1.

MR. NEVILLE: This is -- let me hand

you -- this is Page 1. It must have been a printing

issue.

Did anyone else not have a Page 1?

CHAIRMAN MORELOCK: Thank you, sir.

Then pertaining to the site plan, what

is the distance from the boiler room to the remote

station?

MR. NEVILLE: Approximately 175 feet.

We can add that to the diagram.
CHAIRMAN MORELOCK: Yes, please.

And I did not -- and it may be -- I guess it is on Page 1. I didn't know who was responsible for the boilers and manual and all that. I'm assuming that's going to be Mr. Busch.

MR. NEVILLE: Mr. Busch, yes.

CHAIRMAN MORELOCK: Page 1 handles that question. Thank you.

I -- we've kind of touched on this, but where are the boiler attendant requirements for the shift engineer? They're contained in Appendix G, and there's mention of boiler duties in G7, G13, and G14. But we need some verbiage in the front end of the manual about their duties too.

MR. NEVILLE: Okay. Yes.

CHAIRMAN MORELOCK: Appendix G states security guards relieve PBX operators during their breaks.

So would security guards also serve as remote monitors then if they're going to relieve the PBX operators? Would they be in a position to be considered a remote monitor as well?

MR. BUSCH: I have two officers that make rounds. So, yes, I would have someone to still
be going back there. And they have to make their rounds.

CHAIRMAN MORELOCK: Again, just make your manual clear. I know you know what you're doing, but as we read it, we may not understand it. So thank you.

So is the Parkridge security guards contracted from Walden Security? Is that the way that works?

MR. BUSCH: Yes, sir.

CHAIRMAN MORELOCK: I just needed to clarify that.

And I did not see where it states in your manual in Appendix G that the security guards are boiler attendants. G24 only states they check the boiler.

You may want to label them on your organizational chart and in Appendix G that they do serve as boiler attendants, especially if they're going to walk into that boiler room and make sure that's shut off. That's a boiler attendant responsibility, not a remote monitor responsibility.

MR. NEVILLE: You're talking the security guard as a boiler attendant?

CHAIRMAN MORELOCK: Yes.
Y'all just said that on that third shift, if the remote monitor shuts that boiler down, then a security guard is going to walk out there and make sure that boiler is shut off.

MR. NEVILLE: Yes.

CHAIRMAN MORELOCK: That's a boiler attendant duty right there.

MR. NEVILLE: Page 7 we list the security guard as a boiler attendant.

CHAIRMAN MORELOCK: Again, just make it clear.

Appendix H is your training log, which I see, but I don't see any reference to it in the system manual.

My last comment is, the phone number for the boiler room in Appendix J and the list of manual holders, just make sure all that is correct as the way you're implementing your manual because it -- the boiler room telephone number is blank in the manual --

MR. BUSCH: I do not have a phone in my boiler room.

CHAIRMAN MORELOCK: You don't?

MR. BUSCH: No, we work off of radios.

CHAIRMAN MORELOCK: Just write radio in
there or something.

That's all the comments I have.

Any other comments?

MR. BAUGHMAN: Yes.

MR. BAILEY: I have a question. It may be totally dumb. It may not have anything to do with the variance either.

Are these remote monitoring systems connected to the internet?

MR. BUSCH: No.

MR. NEVILLE: Not in this case, no.

This is a hard-wired shutoff and alarm.

MR. BAUGHMAN: That was exactly one of the questions that I asked earlier, was, is it hard wired, or is it V-I-A, via a connection that's utilizing others.

I have another question.

CHAIRMAN MORELOCK: And there's -- Mr. Baughman can speak to that later, but there's some work going on with that concern that you have with cyber security.

MR. BAILEY: Right.

CHAIRMAN MORELOCK: I just sent an article to the board members last night about a recent article. I'll send that to you as well.
Any other comments?

MR. BAUGHMAN: Yes.

How often is the low-water cutoff being blown down and checked? Is it once each shift? Is it --

MR. BUSCH: Once on the day shift, on the first shift.

MR. BAUGHMAN: First shift only?

MR. BUSCH: Yes.

MR. BAUGHMAN: And what actually enunciates an alarm back to the PBX? In other words, we've got alarms that are selectable. But what is actually alarming back to the PBX? Is it strictly off that 780 controller?

MR. BUSCH: Yes.

MR. BAUGHMAN: So what alarms do you have hooked up into that?

MR. BUSCH: It's the low-water cutoff and whenever the boiler shuts down. Because they don't have a digital display at PBX to let them know if it's low fire, high fire, high steam pressure, low pressure.

But the low water shuts it off. The high steam pressure would shut it off. That would initiate the alarm. Anything that shuts that boiler
down, all they get is a red light. They don't get a
cause, what caused it. That's why we're called.

MR. BAUGHMAN: Is there anything else
besides the low-water cutoff and the high limit?

MR. BUSCH: No.

MR. BAUGHMAN: That's it?

That raises some concern to me also.

MR. NEVILLE: Our fault -- fault list
in Appendix C, is that what you're --

MR. BAUGHMAN: Well, that's selectable,
so that doesn't mean that's everything that's hooked
up.

My question was very specific, and what
is hooked up to alarm back? I'm taking it that the
man that's in charge of training should know
specifically what -- and being intimate with those
boilers, what is being alarmed back.

MR. BUSCH: Whenever that boiler goes
off, trips off, it gives me a code inside the
display inside there. I would go to that display,
and then we would go to our book to see what that
code is.

That is how we would determine what
tripped that boiler off. It's usually low water
when we have a pump -- we've had a pump that blown a
fuse lately. And we found the motor bad. We replaced that.

But that's usually the only thing that trips that motor -- that boiler, rather. Sorry.

MR. BAUGHMAN: Okay.

MR. NEVILLE: We can get a more detailed list of what exactly -- we can have them check every alarm on that boiler --

MR. BAUGHMAN: That's part of what I'm getting at is within these variances --

MR. BUSCH: That would be taken care of.

MR. BAUGHMAN: -- all of these alarms need to be checked. For one to check the devices themselves, low oil pressure switch, low gas switch, high gas switch, both low-water cutoffs, high limits, you name it, all those resets need to be set into this message enunciation.

MR. BUSCH: And what I'm going to do when I get back, I will get Combustion & Controls who tests everything of ours, I will have them get with my men as well as myself, and we'll go through each and every alarm. And they can explain it all.

MR. BAUGHMAN: The inspector will do the same when they come out to do their variance
inspection.

MR. BUSCH: They do.

MR. BAUGHMAN: I'm just a little amiss, let me say, that I'd like you to be as intimate with everything that's on there. I feel like you're in this position of being here to propose this, but you're not as intimate as what --

MR. BUSCH: I should be, yes.

MR. BAUGHMAN: -- you should be.

MR. BUSCH: I'll take care of that.

MR. BAUGHMAN: Very good.

CHAIRMAN MORELOCK: Well, and just while we're talking about fault codes, in the past we've had manuals come to the board, and they've just put the manufacturer's fault code list in there.

Then the state of Tennessee, the chief inspector, deputy inspector go out and do a site visit, and they say, Well, I want you to actuate this alarm, and it's not built into your system.

So put the fault codes in your manual that you will actually be using day in, day out, because when they come on site, they can pick any of those fault codes on that list. Make sure they're all active fault codes that you're using.
MR. BUSCH: Yes, sir.

CHAIRMAN MORELOCK: Okay. Any other comments?

MR. BAUGHMAN: Do we need to bring that up?

MR. CHAPMAN: Yes.

MR. BAUGHMAN: We've got a -- that's under Appendix -- or the checklist.

What about the date? Is the date --

MR. CHAPMAN: That's it.

MR. BAUGHMAN: Sam has got a different revision.

CHAIRMAN MORELOCK: Do you have 9?

MR. CHAPMAN: 10, but we're on 5/17, and there's no date on this one.

CHAIRMAN MORELOCK: As far as the checklist goes?

MR. CHAPMAN: Yes.

CHAIRMAN MORELOCK: The one in our manuals is Revision 10.

MR. CHAPMAN: Yeah, but the one that we're using is 5/17 as the date.

CHAIRMAN MORELOCK: Over here instead of October?

MR. CHAPMAN: Yes.
CHAIRMAN MORELOCK: They need to provide you with the latest?

MR. CHAPMAN: Yes.

CHAIRMAN MORELOCK: Make sure the chief inspector has the latest checklist. Ours are dated October 2, 2017; his is dated May 2017.

Any other comments?

Hearing none, do I have a motion?

MR. BAUGHMAN: Motion to approve contingent upon the inspector's approval site visit.

MR. BOWERS: I second.

CHAIRMAN MORELOCK: I have a second.

Any more -- any more discussion, comments, concerns, questions?

Call a vote. All in favor say aye.

In Unison: Aye.

CHAIRMAN MORELOCK: Opposed, abstentions, not voting?

Gentlemen, you have a contingently approved variance. Update your manual based on the comments from the meeting today. Get that revision to the state, and then they'll do a site visit to see how that works out. It's contingent on their successful review of your site.

MR. BUSCH: Thank you.
CHAIRMAN MORELOCK: Thank you.

Our next item is 18-03, Jack Daniel's Distillery. They request a new variance for two vessels.

So if you will come forward.

While you guys are being seated, there's a conflict for this item? One? We do have one conflict.

MR. BAUGHMAN: Do I need to state what that is, Mr. Bailey, to be able to --

MR. BAILEY: Yes.

MR. BAUGHMAN: We provided training to Jack Daniel's within our boiler training school. So it's been limited to that training. It's regarding safe boiler operations and concerns.

CHAIRMAN MORELOCK: If you will introduce yourselves and present your manual, please.

MR. ROTH: Good morning. My name is Denis Roth. I'm the distillery plant manager for Jack Daniel's.

MR. COLLINS: I'm Clint Collins. I'm the boiler/by-products supervisor for Jack Daniel's.

MR. HORTON: I'm David Horton. I'm the boiler/by-products production manager for
Jack Daniel's.

MR. ROTH: So we're here this morning to request a new variance on two of our gas boilers. This is to replace a variance that was granted 2015. The reason for this new variance, we have installed a new Limpsfield burner for our Nebraska boiler and a new control system for both Autoflame Mark 8. These boilers provide steam for our distillery operations and our by-products operations. We run 24/7, 365 days a year.

The boilers are operated by boiler operators, at least two on two 12-hour shifts. One is always in a control room. One will be roving in our plant operations.

CHAIRMAN MORELOCK: Okay. Do I have a motion to discuss this variance?

MR. BOWERS: I'll make a motion to discuss.

CHAIRMAN MORELOCK: Second?

MR. BOWERS: Second.

CHAIRMAN MORELOCK: I have a second. I'll open the floor for questions or comments.

MR. BAUGHMAN: You've got the Limpsfield burners.
English made?

MR. COLLINS: Yes, sir.

MR. BAUGHMAN: Autoflame controls?

MR. COLLINS: Yes, sir.

CHAIRMAN MORELOCK: So I have a basic question.

This is a renewal, correct?

MR. COLLINS: Yes, sir.

CHAIRMAN MORELOCK: So with a renewal, the only thing we really need to address is the changes to your variance.

So is the only change the new controllers?

MR. ROTH: The new controller and the new burner on the Nebraska.

CHAIRMAN MORELOCK: With that said -- I will say your manual is very well written, and we appreciate the time it took to put all that together.

The only questions I have is, can your computer control -- controls DCS and all that, can the computer alone shut down a boiler during an emergency?

MR. COLLINS: We have an emergency shutoff system that's --
CHAIRMAN MORELOCK: So it still takes a human interface to shut it down?

MR. ROTH: Yes.

CHAIRMAN MORELOCK: The only other thing I'd add to that, in your manual, you do say if you shut the boiler down you're going to correct the problem.

If you for some reason cannot correct that problem, I would just suggest you put in your manual you go back to operating on 20-minute rule until you correct that -- whatever issue that may be. That's the only other comments I have.

Yes, sir, go ahead.

MR. BAUGHMAN: Is the new burner UL listed?

MR. COLLINS: I'm not sure.

MR. BAUGHMAN: It has to be UL listed.

MR. COLLINS: I'm sure that it is.

MR. ROTH: We'll follow up on that.

MR. BAUGHMAN: Yeah. It's one of the things -- and being that it's a foreign manufacturer, it's just one of those crossing T's, dotting I's, and dotting lower case J, just to make sure that it's UL listed, the Autoflame is UL listed.
But it has to have that listing on there and has to cover your guys' selves also.

MR. ROTH: Okay.

CHAIRMAN MORELOCK: Any other questions or comments?

Mr. Toth?

MR. TOTH: Marty Toth, Boisco Training Group.

What was the burner again? What burner are you putting in?

MR. COLLINS: Limpsfield.

MR. TOTH: Limpsfield? It had its own control system, I assume.

MR. COLLINS: The Autoflame is the control system. They're sister companies.

CHAIRMAN MORELOCK: Any other comments?

Hearing none, do I have a motion for this item?

MR. BOWERS: Motion to approve.

CHAIRMAN MORELOCK: Contingent approval on successful site visit by the chief inspector?

MR. BOWERS: Yes.

CHAIRMAN MORELOCK: And any corrections -- or recommendations from the board today?
Any further discussion?

Hearing none, I'm going to call the question, all those in favor say aye.

In Unison: Aye.

CHAIRMAN MORELOCK: Opposed, abstentions, not voting? One not voting -- is it abstention or not voting if you're conflict of interest?

MR. BAILEY: It would be not voting.

CHAIRMAN MORELOCK: Gentlemen, you have an approved variance dependent on the visit from the chief inspector.

MR. ROTH: Thank you.

MR. COLLINS: Thank you.

CHAIRMAN MORELOCK: Item 18-04 has been removed from the agenda, so that completes our new business.

Our next item is Section IX, which is Discussion Items. Our first discussion item will be the status of the 2018 Tennessee Boiler Safety Conference.

MS. RHONE: Good morning.

Deborah Rhone, boiler office supervisor.

To provide the update for the 2018 Tennessee Boiler Safety Conference, the planning is
in process. The dates are the week of September 17 through the 21st here in Nashville. And, of course, during that time, that Wednesday, September 19, we will conduct the board of boiler rules meeting.

The trainings will be held here in the building. Announcements will be going out as soon as we select a host hotel. We have been out on some site visits around the area for the host hotel. No final decision has been made. We will be providing that information shortly.

Any other questions?

CHAIRMAN MORELOCK: Any questions or comments? Yes, Mr. Toth.

MR. TOTH: Marty Toth, Boisco Training Group.

I just want to commend the Department of Labor, Kimberly, and your group for continuing the conferences. It's something that we started a few years back, and I think it's really beneficial to bring together not only the state inspectors but also the insurance inspectors and people of industry.

So I commend y'all for continuing that tradition. And also I'm there to help wherever I can.
CHAIRMAN MORELOCK: So for clarity for the audience too, this will be an open conference, right?

MS. RHONE: Yes, yes.

CHAIRMAN MORELOCK: To local chiefs in neighboring states, National Board, companies, I mean, it's a great opportunity for everybody to get together at these conferences as Mr. Toth stated. It's a wonderful opportunity for training, technical information, building relationships, safety topics. It's an excellent venue, so I highly recommend it.

So will you -- will the boiler unit be getting the information out so we can publicize this?

MS. RHONE: Yes. We'll be working on a flyer once we get more information regarding the agenda topics too. We have to make contact with several presenters. We also have a couple of new items that we want to get approval from our assistant commissioner as well as board members and chief as well as we're discussing things we'd like to include in this year's conference that we think is going to be fun and exciting and very knowledgeable.

So we're excited about doing that as
well.

CHAIRMAN MORELOCK: All right. Very good.

Again, thank y'all for the support and hard work.

Any other comments?

All right. We're looking forward to it.

MS. RHONE: All right. Thank you.

CHAIRMAN MORELOCK: Our next item is update on administering the National Board Commission Exam.

MS. JEFFERSON: Mr. Chairman, I want to provide an update on the proposed legislation, the status of the legislation that was proposed during the 2018 legislative session.

As y'all know, a bill was proposed to update the current code. We wanted to reflect the current code to the current processes that we actually performed within the boiling unit as well as the processes for the National Board.

So that's what we did.

This legislation will align the current statute to those current processes.

And the status -- unless y'all want me
to talk about it a little bit -- if you want me to
talk about it, we will. I believe we may have
already addressed that in the previous meeting.

CHAIRMAN MORELOCK: I think so.

MS. JEFFERSON: Just to give y'all a
status, it has been approved by the legislative
committees. It's gone through that process. It's
been approved by both houses. And it has been
signed by the speaker and the lieutenant governor.
It's been sent to the governor's office to be
signed. So we're waiting for it to be signed.

CHAIRMAN MORELOCK: Correct.

MR. BAUGHMAN: Super.

CHAIRMAN MORELOCK: Any questions or
comments about that? That's going to clarify the
language on presentation of the commissioning exam.
Our language is a little bit out of date. It's
going to mirror what you see in the National Board
guidance as far as the way the test -- the exam is
administered. So it's going to be a welcomed
improvement.

Thank you for all the hard work.

Yes, sir.

MR. BOWERS: Yeah, the question I have,

once the governor signs it, does that change the
rules -- our rules?

MS. JEFFERSON: Well, the rules have already been changed. That was the issue. The rules have been changed, but the law was inconsistent. So we wanted to make the -- everything consistent.

CHAIRMAN MORELOCK: 800-3-3 had been updated. It was in conflict with 68-122-109, so they have now fixed 109.

MR. BAILEY: Once it goes into effect, in other words, the rule will actually be in effect.

CHAIRMAN MORELOCK: Yes.

MR. BAILEY: Right now the statute is trumping the rule.

CHAIRMAN MORELOCK: That's right.

MR. BOWERS: Okay.

CHAIRMAN MORELOCK: Any other questions or comments? Very good.

Moving on to Item X, which is Rule Cases and Interpretations, Rinnai America is requesting to change Rule Case 98-03 to eliminate the 18-inch required clearance from the sides of tankless water heaters.

Gentlemen, if you will come forward, we'll be happy to discuss this item.
MR. HOUSTON: Good morning. I'm Ansley Houston, director of the commercial water heating group at Rinnai America.

Also with us is John Wood from Sunbelt Marketing, now representative here in the Tennessee area; and Michael Knoblett, product development manager who will lead the discussion.

MR. KNOBLETT: I'll pass these out. So as we -- as you stated, we're here to address the 18-1/2-inch clearance requirement for tankless water heaters. The first couple of pages of this document are just citing the specific code where it calls out that 18-inch clearance.

CHAIRMAN MORELOCK: Can I ask one quick question?

MR. KNOBLETT: Yes.

CHAIRMAN MORELOCK: Is this item revised from what was provided to us in the packet?

MR. KNOBLETT: No, same thing.

CHAIRMAN MORELOCK: The other thing, if you'll permit me, are there any conflicts of interest for this item?

Thank you. Proceed.

MR. KNOBLETT: The basis of our request is, one, to eliminate the 18-inch clearance and
change that to manufacturer's recommendations.

We've backed that up on our own manufacturer level by testing to the ANSI standard for clearance.

And I believe the other objection to this was access to the rating plate. So we've requested that the code was changed to default to manufacturers. And then if access to that rating plate is an issue, put that specifically in the code to read that that rating plate must be visible.

We have some ideas how we could get around that on our own equipment. One is either putting it up on the front of the machine or creating some kind of tethered-on access plate so it could be easily viewed from the front.

CHAIRMAN MORELOCK: Do I have a --

well, let me ask a basic question.

Is this -- are you -- are we just discussing this? I don't see a proposed change to the rule -- to the board case, do I?

MR. KNOBLETT: So on -- next to the last page where it says request for rule amendment -- we don't have specific verbiage in the -- what we would want the code to be because we -- our request is to just change that to -- from 18-inch to manufacturer's recommendations, but we
don't have that specifically detailed out.

CHAIRMAN MORELOCK: We'll be happy to discuss, but I don't have a proposal.

Is that okay with y'all?

MR. KNOBLETT: Yes.

CHAIRMAN MORELOCK: Just wanted to clarify that.

So I'm going to open it up for discussion since we're not taking action on anything.

What questions, comments do you have?

MR. CHAPMAN: My first question, you mentioned that -- changing that to the front cover.

MR. KNOBLETT: Potentially, yes.

MR. CHAPMAN: I've found out that when you take those covers off -- and most of the time there's more than one unit inside that space, who says that's only going to have one cover off at a time? Most people take them off, and they have three or four laying there. The average person picks them up and sticks them back on.

Is it saying that that's the same unit?

MR. KNOBLETT: Our request isn't necessarily to put it on the front. Our request is to change maybe to permanently attached visible from
the front, something like that.

We can come up with a method to attach based on your actual requirement.

Putting it on the front cover was just one of our ideas, but it really depends on how that code is written.

MR. CHAPMAN: I'm just asking the question on that because a lot of the other units out there -- because you're speaking for just Rinnai.

MR. KNOBLETT: Correct.

MR. CHAPMAN: We have different companies out there. They don't change it. So if we change that 18 inches to the manufacturer's --

MR. KNOBLETT: With a -- an additional comment that the rating plate must be visible -- or word that in such a way that even if you were to reduce that to two inches in our case, there would still be part of the code that says the rating plate must be visible and permanently attached.

MR. CHAPMAN: I discussed it with other jurisdictions. Right now I have 24 comments from 24 other jurisdictions. Some of them doesn't inspect water heaters under 400,000. Other ones say they got to have 3 feet.
MR. KNOBLETT: What is the basis of the concern? Is it -- is it a safety issue, or is it a --

MR. CHAPMAN: Well, with Tennessee -- and I can only speak for Tennessee. Tennessee states you must have 18 inches of clearance because -- it used to be 3 feet. Then we went in and made a rule case and broke it down to 18.

MR. KNOBLETT: Based on temperature or safety or --

MR. CHAPMAN: Clearance, because they knew at that time -- at the time, my predecessor knew that you didn't need 3 feet of clearance on a stand-up water heater. So he took it and brung it to the board, and they came up with 18 inches.

CHAIRMAN MORELOCK: Mr. Toth, do you have a comment?


For those that may not know, I was former chief boiler inspector for the state of Tennessee. I was not the chief at the time that the initial board case back in 1998 was addressed. However, it was during my tenure that we started addressing these type of interpretations as board
cases and board interpretations; board case being
something that went -- I wouldn't say against but
extended to what the written rule was. A board
interpretation is just that, it was an
interpretation of what the meaning of a rule was.

So with that said, the intent of
BC98-03, I believe is the number, BC98-03 was to
address water heaters and unfired pressure vessels.
So what ended up occurring was, as we went through
time during my tenure, we started finding the
introduction of tankless water heaters into the
market, modular water heaters into the market, and
stacked heaters into the market.

And so the need was to address that,
and we did so in BC06 -- help me. I was trying to
look it up. I think it was BC06-23. So that
specifically addressed wall mounted water heaters,
stacked water heaters, and modular water heaters.

For those that don't know, the modular
water heaters would be, in essence, separate units
actually put together side by side, just so you
understand what that means.

Now, the thing is when a manufacturer
goes through and gets their listing and gets their
ULs and things of that nature, what's taken into
consideration is usually most cases fire protection.

So this gentleman, you were asking, well, why -- what was the intent, and I believe Chief Chapman alluded to the facts that it used to be three feet. Well, the purpose of the three feet is for proper inspection. It's not for fire protection. It's the ability to actually get in, see the unit from all sides.

The board case that was presented back in 2006, obviously we can't inspect the back side of a wall mounted unit, but we can inspect the sides, the top, the bottom.

And now what you're proposing is to even make it smaller, even make -- give less opportunity for the inspector to inspect.

The reason for the board case was to allow for proper inspection.

MR. KNOBLETT: So to that point as well, we offer clearance, but we also offer service clearance. So the front panel in our case, we were recommending 24 inches, so the cover is removed.

We do not need to inspect from the side other than to see the rating plate as it stands out. There's no -- there's nothing to inspect on our product.
MR. TOTH: Well, you say that, but, again, your product.

MR. KNOBLETT: Right.

MR. TOTH: Another manufacturer that has the same type of wall mounted unit, maybe a different -- the board has to set rules, and the board sets board cases. You have to think more broad stroked with that.

CHAIRMAN MORELOCK: Well, and if you don't, your competitors can come in and say we're providing prejudicial treatment to you; you're penalizing us. ASME National Board faces the same concern when they write rules, that they're not limiting -- I forgot how they call this, not limiting commerce or something like that; that we're being unfavorable to one manufacturer and more favorable to another.

MR. BOWERS: Yeah, I know on yours it looks like the safety valves come off the bottom. But there's some units the safety valves come off the side. So you go and limit the side, and also the data plate exactly.

Sam is exactly right, these covers get taken off. Sometimes they'll get put back on. You can't have mix matched. The data plate has got to
be attached to that hot water heater where it cannot be removed by removable cover.

MR. HOUSTON: Ansley Houston, Rinnai.

To your comment about -- I totally agree with every manufacturer is different. Therefore, our proposal would be to write it such that manufacturer safety clearance requirements would be recognized, rather than a generic 18-inch, because that would give them manufacturer -- the manufacturer the right -- or the ability to test and design for minimum clearance that passed the ANSI standard, and that -- they would be -- there wouldn't be prejudicial treatment for any particular manufacturer.

If they want to design it and test it to the standard, put that in the manual like we've done, like a lot of them have done. That would -- I think would cover that.

CHAIRMAN MORELOCK: Mr. Toth.

MR. TOTH: Marty Toth, Boisco Training Group.

Again, that ANSI standard is going to be addressing things as fire protection; it's not addressing inspection. And that's something that we have dealt with in the industry long before the
tankless water heaters really became popular in this state.

I came on -- I'm trying to remember what year now -- 1993 with the state. And I remember the first introduction of the Rinnai units into a commercial application. It really brought a lot of discussion about.

Even before that, we had other manufacturers, coiled fin units, Lochinvar, which is a very popular brand here locally. They had the same claims. There's no service area servicing on the back side or on the sides. We've had these same discussions with them for years.

So I do understand where you're coming from with the ANSI, but I believe the board and the inspectors are looking at it from an inspection.

CHAIRMAN MORELOCK: What we would need to see as a board is all the manufacturers of these tankless water heaters need to get together, and your question is going to have to pick the worst dimensions from all of those different manufacturers to build that envelope. It doesn't matter if it's your unit or somebody else's unit. If it goes into that space, it can be properly inspected.

So yours may be more compact, but the
distance required to inspect those, it's going to have to be a uniform application so none of your competitors can cry foul.

So, I mean, it's -- you know, what the board needs is a proposal that's been researched and you've got documented research, because, for instance, in your -- in your proposal under the page that says Burn Hazard Data, and in the bottom, it says, What are other states doing, your second bullet says, All states but Tennessee accept tankless water or tankless rack systems.

Is that a true statement?

MR. HOUSTON: Absolutely.

CHAIRMAN MORELOCK: Not according to what he's got in e-mail. So we need facts.

MR. HOUSTON: You've got a statement that says they don't allow our clearances to be accepted?

MR. CHAPMAN: I have from Hawaii, Hawaii says 3 feet. I have Ohio, say it's 3 feet. I have a couple other states that's stating -- some of them saying 18 inches; some say 3 feet. Some of them say, We don't even inspect them. I have -- Washington states that it has to be outside.

We have different criteria on it. So
where it all -- where all of them say, It can be manufactured, is not a true statement.

MR. HOUSTON: It's never enforced, so that's a issue with that particular state.

We sell hundreds, thousands in the state of Ohio that are mounted one inch apart on a daily basis, so that's something I'm interested -- that's the first time I've ever heard that.

Same thing in Hawaii, I can show you pictures of units in Hawaii mounted one inch apart from years ago. And even more recently, we've shipped our preconfigured systems in the state of Hawaii on a boat, by the way. It's interesting. That's the first time I've heard that. So that's good information. Thank you.

MR. CHAPMAN: I shot this e-mail to the jurisdiction Thursday, and they started --

MR. HOUSTON: You said Ohio, Washington, and Hawaii.

CHAIRMAN MORELOCK: So we as a board need something standardized that we can review and vote on for the state of Tennessee.

But in a larger sense, we want to make sure -- these chiefs meet annually -- twice annually for this very reason to make sure -- we're trying to
be uniform in our application of rules.

So we really want to make sure that what is put forward could be used as a model for other states to implement for consistency sake.

So I'm not going to tell you how to do that or what to do, but -- but that's what I would strive for is something that doesn't restrict commerce, that all your competitors can live with, all the states are agreeable to it. Then that way we get uniform enforcement, which makes every -- which makes your job as a supplier easier, so the rules are the same no matter who you sell to.

MR. PISCHKE: Mike Pischke,

National Board.

I guess one of the things that I'd like to know is, what part of these need inspection? Does the sheet metal cover, which isn't a, you know, pressure boundary, does that really need to be inspected? Or is it the -- the pressure -- just the pressure boundary parts, the pressure relief parts, of course, the name plate, and things like that?

So I think defining what needs to be inspected is probably a first step in.

MR. HOUSTON: That was my next question.
Do you have any discussion on that?

CHAIRMAN MORELOCK: We can't do that for you. You'll have to do that.

MR. HOUSTON: I think I'll speak for us and the other manufacturers, that there's nothing to be inspected. That's where we're at. I think we probably went too fast past that point, but there's nothing accessible from the sides.

There's nothing -- you can't take a cover off from the side. The cover is -- front cover. Once removed, there's clearance and access to every component for serviceability and inspection on the -- in the products. By design, that's the way it is.

So we in our mind would go more toward the safety aspect, which is why I keep referring to that.

MR. BAUGHMAN: To that extent, from the guy that's installing it is typically not the same guy that's servicing it. So you've got required clearances, let's say, in the front of the heater where your accessibility is being -- and you're showing six inches, if it's a -- both to noncombustibles to combustibles.

But then you made a comment earlier
about recommended clearance in front of you, the
24 inches for servicing. So it needs servicing.
But the guy installing that is going to look at that
and go, I can do 6 inches. So the guy that comes in
to service it has no accessibility into it to
service it.

There needs to be some definition too
for the poor guy that's coming behind the guy that
installed it to make sure that there is enough room
in front of the unit, even though from a clearance
standpoint there's not. The guy still has to
service it. If he can't service it, he's going to
replace the heater, which isn't a bad thing for the
heater manufacturer.

But if there's a clearance that's
recommended, then that should also go into the
clearance for the installation in my mind.

MR. HOUSTON: You said recommended, but
is it required?

MR. KNOBLETT: It's a serviceability
requirement, so in other words --

MR. BAUGHMAN: Okay. There's a
conflict then because it says clearance requirement,
6 inches. But then down below, it says clearance
for servicing is 24 from the front.
MR. KNOBLETT: So items could be removable. That's the difference between the two.

MR. BAUGHMAN: It's just that -- you can see how there could be a misinterpretation for two sets of numbers, and it needs to be more clear when this gets proposed as far as the actual clearances that are going to be required.

CHAIRMAN MORELOCK: Mr. Toth.

MR. TOTH: Marty Toth, Boisco Training Group.

If you look at BC06-23, one thing you'll notice from that is that was actually a submission that came from the boiler inspection provision. It wasn't from the manufacturers. It wasn't from the industry of wall mounted tankless water heaters.

So to what Chairman Morelock alluded to, if you get together and you put together your request per the outlines and guidelines for submitting it, you know, you're better suited to explain your side of it more than I was back in 2006 when I submitted that for clarification.

So, hey, I like your unit. I have your V75I in my garage, so we're good. But other than that, you need to --
MR. HOUSTON: Is it six inches off the wall?

MR. TOTH: It is. I know how this works.

No, I would suggest that you come look at that and you make it more specific to your market, your industry.

Thank you.

CHAIRMAN MORELOCK: Well, and just a comment. Through ASME and National Board, we see this a lot. People are developing products and pressure equipment. One of the things those organizations recommend is that everybody gets together and make up a common set of rules.

That's kind of what we're suggesting is just, put this proposal together, find out what is reasonable not only for installation but certainly inspection, because these inspectors are going to have to look at this equipment.

The recent revision to Rule 800-3-3 states that if you're at 199,999 BTU per hour, it does not have to be built to ASME code. But if it's between 100 and 199, it's got to be registered with the state of Tennessee, so they're going to inspect it.
And if you go over 199,999, if you go to 200,000, then it's got to be built to Section IV.

You're not alone. I mean, there's been some manufacturers that used to build some of this equipment to Section VIII, and now they're building it to Section IV. There's a lot of that going on. You're not the only ones struggling with what this all looks like.

Again, my advice would be, certainly work with folks that are building these for code applications, noncode applications. Even get together and come up with what is going to work for the installer and the inspector, put it in writing, bring it to the board, and we'll be happy to review it.

MR. HOUSTON: So we need to get on the next agenda obviously, right, to --

CHAIRMAN MORELOCK: If you're going to present a board case for approval, yes, you will. If you'll be ready in June, fine. If not, you can bring it in September or December or whenever you're ready.

MR. HOUSTON: And do our best to get with the major manufacturers of the tankless products?
CHAIRMAN MORELOCK: Yes.

MR. HOUSTON: Okay.

CHAIRMAN MORELOCK: That's the advantage of --

MR. HOUSTON: At this point, just speaking frankly, where -- it is impeding commerce in the state of Tennessee, because some of our customers with the real estate constraints and the tight quarters in restaurants and the like, to free up more space, prefer to mount them -- six units close together on a wall with the manufacturer's clearance, and we do it all around the country.

At this point, we have -- affectionately known as the Tennessee 2. It's a similar access that we've -- I believe John named it. I would actually hate to see it go away because it's a really cool name.

But it does have the 18-inch -- 18-1/2-inch between them. That actually impedes our ability to sell it if somebody needs three units on a wall.

So we -- that's something we do want to get past quickly, and we'll do our best to pull this together before June.

CHAIRMAN MORELOCK: Just a counterpoint
to that is that there's been longstanding
installation practices for CO2 systems in
restaurants, and a few years ago people started
dying.

Now there's CO2 installation
requirements in Part 1 of the NBIC. I'm sure it
probably impedes commerce, because these new changes
are a lot different than the way they used to
install the old equipment. So we don't want our
water heaters to have to have a fatality to get the
rules fixed.

MR. HOUSTON: Real quick.

Can we have one more discussion on what
effectively would be -- and if the people behind want to
talk too, that's great -- what we're actually
looking for on the sides other than the rating
plate? What would you want to inspect on the side
other than a rating plate?

MR. CHAPMAN: We'd have to be able to
get around to see, because, like -- and I'll speak
for myself. I've got a fat head, so I need to be
able to get my head in there to see.

MR. HOUSTON: My point is, there's
nothing to see. There's no connection points;
there's no -- there's nothing that can't be seen
from the front cover off, so...

CHAIRMAN MORELOCK: Mr. Eskridge.

MR. ESKRIDGE: Chip Eskridge with Jacobs Engineering.

I think the same limitation on inspection exists in boilers where often remote scopes and stuff is used for inspection.

Why couldn't something like this, inspection mirrors be used?

To take it further, I think this issue is bigger than the Tennessee level. I've come across heaters in Pennsylvania where I found out owners were not complying with the Pennsylvania law.

I think it's the owners level of ignorance knowing what state laws -- how they're written. Everybody knows speed limits in every state; everybody knows, you know, general public information.

But at this level, the small heaters, small vessels tend to be a gray area.

I think what you need to do is take your issue to the National Board and try to get something at the National Board level approved so that it's all jurisdictions complied if it's in the National Board book, because you've got 3 feet,
you've got 18 inches.

Conformity would be to work with the National Board on this.

CHAIRMAN MORELOCK: National Board Part 1 is for installation, so let me -- that's a very good recommendation.

MR. TOTH: Marty Toth, Boisco Training Group.

Very good comment there. Let me just make sure, recognize that just because it's in the NBIC doesn't necessarily mean the individual jurisdictions are going to accept it.

With that said, these type of units, I agree with you, you talk about the inspection mirrors and scopes and things of that nature. Primarily the reason why is to have a better angle of inspection on the heat exchanger on your units.

But, again, like I go back to my previous statement, you, the manufacturers of these type of units, are better suited for bringing this information to this body for this body to make the determination. So continue with the discussion, but really it comes down to getting all your eggs in a basket, putting forth the request.

I think this board is open-minded to
that.

MR. BAILEY: Anybody want to know how many inches it is from the front of Sam's head to the back?

MR. TOTH: Also, Mr. Chairman, let's remember that in the requirements within .08 -- I want to say 4B -- it's changed since I was chief -- is that correct --

MR. CHAPMAN: Yes.

MR. TOTH: -- for installations?

In B, there is a stipulation that allows for a chief's exemption. So let's keep that in mind when you look at that. You may want to think about that too that because we started a permit system under my tenure as chief, that got around the fact that some man -- or some owners were ignorant to it. We in the state of Tennessee before we started our permit system, we were ignorant to a lot of installations.

In doing so now, there are those requirements. Those requirements require for clearance diagrams with the permit that is reviewed by the chief inspector and his designee. So some of this could be handled under those areas too.

CHAIRMAN MORELOCK: Any other comments?
Excellent discussion.

MR. HOUSTON: Thank you. Appreciate your help.

CHAIRMAN MORELOCK: Go forth, put us something together, and we'll be happy to review it.

MR. HOUSTON: Thank you.

CHAIRMAN MORELOCK: Look at the board cases online. It will show you the format. If you have any questions, contact Mr. Chapman or me, and I'll help you put it into the correct format to make it a board case. You're really looking at a board case instead of a board interpretation. Put a board case together, get it on the agenda, and we'll be -- get it to us 45 days in advance.

We'll be able to review it and go forward.

I do agree with Mr. Eskridge's recommendation, work with other manufacturers, work with the National Board, especially the ones that are going to be regulated. That would be a good thing. Typically things like that would be created as a supplement in the NBIC that would give specific rules for those installations.

Anything else?

MR. HOUSTON: I would like to -- Sam,
I'd like the Ohio codes afterwards.

Can you give me the exact code that they -- did they send back a code number or --

MR. CHAPMAN: I'll get it to you.

MR. HOUSTON: Thank you.

CHAIRMAN MORELOCK: Thank you for your time. Very good discussion.

We're down to Item XI. Our next meeting is scheduled for June 13 here at the Department of Labor. I'm going to have a -- I've got an announcement/adjournment.

We've asked Mike Pischke to be here today. Mike was on our board for almost a couple years. He came to us in September of 2016 and brought a great service to the board representing boiler manufacturers. We thank you for -- thankful for his service.

Mike has accepted a position of assistant executive director at the National Board, so he has relocated to Columbus, Ohio, and had to tender his resignation to the Tennessee board.

So we're going to miss his service, thankful for his friendship. As we adjourn, we're going to have a celebration of Mike's service, so hang around for that and have some refreshments with
us. We'll tell tales on him and all that fun stuff.

Please stay for that.

If there's not anything else, I make a motion we adjourn.

MR. BAUGHMAN: So moved.

CHAIRMAN MORELOCK: Thank y'all for coming.

(Proceedings concluded at 10:35 a.m.)
REPORTER'S CERTIFICATE

I, Elisabeth A. Miller Lorenz, RMR, CRR, Notary Public and Court Reporter, do hereby certify that I recorded to the best of my skill and ability by machine shorthand all the proceedings in the foregoing transcript, and that said transcript is a true, accurate, and complete transcript to the best of my ability.

I further certify that I am not an attorney or counsel of any of the parties, nor a relative or employee of any attorney or counsel connected with the action, nor financially interested in the action.

SIGNED this 29th day of March, 2018.

____________________________________
Elisabeth A. Miller Lorenz, RMR, CRR

My Notary commission expires: 3/10/2019
Tennessee LCR No. 66
Expires: 6/30/2018